



**LATE KU DURGA K. BANMERU SCIENCE COLLEGE,  
LONAR, DIST. BULDANA. 443302.**

(Affiliated to Sant Gadge Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Mathematics**



**Certificate Course on**

**Quantitative Aptitude**



**By**

**Department of Mathematics,**

**Late Ku. Durga K. Banmeru Science College, Lonar,**

**Dist. Buldana. Pin. 443302.**

**Jan-2020**



**LATE KU DURGA K. BANMERU SCIENCE COLLEGE,  
LONAR, DIST. BULDANA. 443302.**

(Affiliated to Sant Gadge Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Mathematics**

---

**Introduction**

**Quantitative Aptitude** is the most important requisite for clearing any competitive exam. Quantitative aptitude test are becoming the norm for competitive exams in India. The aptitude questions essentially measures candidate mental numerical ability, logical formulae application & accuracy of calculation. It also test your mental alertness.

Department of Mathematics of our Late Ku. Durga K. Banmeru Science college, Lonar is organizing this certificate course in order to enhance students problem solving ability and help those to student who are preparing for any type of competitive examination.

**Course Objectives**

- To enhance problem solving skill among student.
- To improve the mathematical skill
- To help students who are preparing for any type competitive examination.
- Thinking critically & applying basic mathematics skill to interpret data.
- To prepare student for campus placement aptitude papers



**LATE KU DURGA K. BANMERU SCIENCE COLLEGE,  
LONAR, DIST. BULDANA. 443302.**

(Affiliated to Sant Gadage Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Mathematics**

---

**Course Outcome**

On successful completion of the course, the students will able to :

- Understand the basic concepts of quantitative ability.
- Solve campus placement aptitude papers covering quantitative aptitude.
- Compete in various competitive exams like MPSC , NET/SET, CAT, GATE (aptitude part)

**Eligibility**

- Student of B.sc II<sup>nd</sup> & III<sup>rd</sup> (Mathematics)

**Admission Procedure**

- Interested candidates have to make application to the Mathematics Department. A minimum of 20 candidate are require for commencing the batch. First come first serve based admission will be there.

**Fee Structure**

- Rs. 500/- Per candidate.

**Attendance**

- Minimum 75% Attendance is necessary in theory classes to appear for final examination.

**Certification**

- The Candidate successfully completing the Course shall be awarded a Certificate in appropriate form.

**LATE KU DURGA K. BANMERU SCIENCE COLLEGE,  
LONAR, DIST. BULDANA. 443302.**

(Affiliated to Sant Gadge Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Mathematics**

---

**Syllabus**

**Unit I: Basic of Quantitative Abilities**

- Problems on Number System
- Problems on HCF & LCM
- Decimal & Fraction
- Simplification.

**Unit II: Arithmetic Quantitative Abilities**

- Averages
- Profit & Loss
- Ratio & Proportion
- Percentage

**Unit III: General Aptitude Problems**

- Number & Ages
- Problem on Trains
- Discount
- Partnership
- Mixture & Allegation

**Unit IV:, Problems Related to Time**

- Time & Work
- Time & Distance
- Calendar
- Clock

**Unit V: Modern Maths**

- Permutation & Combination
- Probability

**LATE KU DURGA K. BANMERU SCIENCE COLLEGE,  
LONAR, DIST. BULDANA. 443302.**

(Affiliated to Sant Gadge Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Mathematics**

---

**Teaching & Examination Scheme**

Course	Teaching workload	Exam	Grade System
		Theory (100 Marks)	
Certificate Course in "Quantitative Aptitude"	Total 30 lectures of One Hour	50 Multiple Choice Question (each for 2 Marks)	Marks 100-81: O Grade 80-71: A Grade 70-61: B Grade 60-51: C Grade 50-00: Fail

**Recommended Books/ References**

- 1) R. S. Aggarwal .Quantitative Aptitude for competitive examination .
- 2)Arun Sharma – Quantitative Aptitude for CAT.
- 3)Arihant Publications – Fast track objective Arithmetic.
- 4)Abhijit Guha/Mcgraw Hill education- Quantitative Aptitude for all competitive examination .



**LATE KU DURGA K. BANMERU SCIENCE COLLEGE,  
LONAR, DIST. BULDANA. 443302.**

(Affiliated to Sant Gadage Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Mathematics**

**Organizing Department**

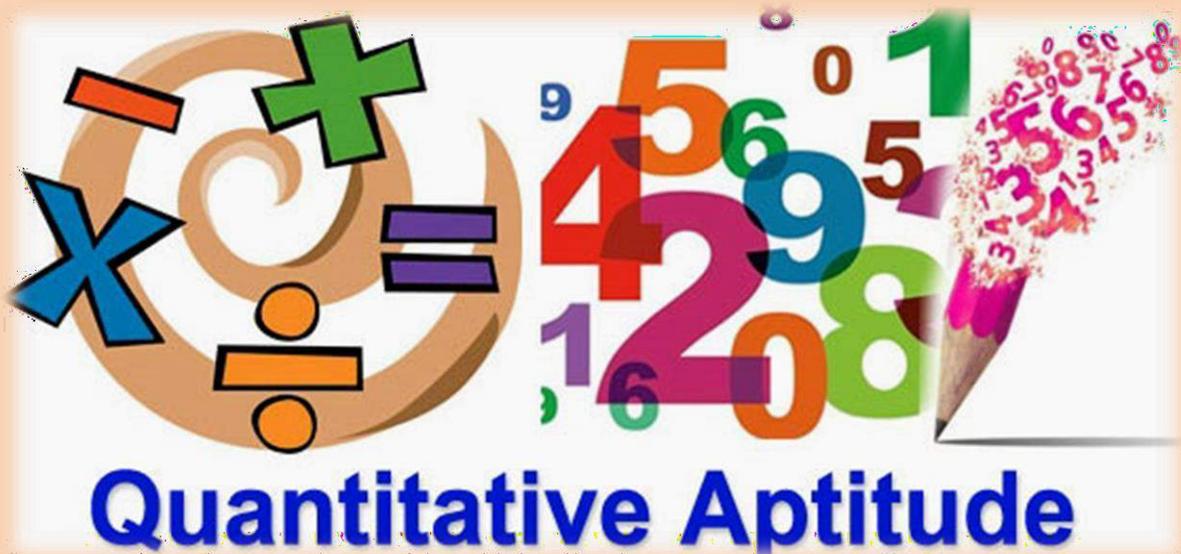
Department of Mathematics, Late Ku. Durga K. Banmeru Science College,  
Lonar ,with kind guidance of **Principal Dr. Prakash K. Banmeru sir.**

➤ **Course Coordinator- Prof. Saurabh P. Gaikwad**

Asst. Prof. & HOD- Mathematics,  
Late Ku. Durga K. Banmeru Science College,  
Loni road, Lonar , Dist Buldana  
9763055670

(Course Coordinator)

Principal



Amrut Sevabhavi Sanstha, Parbhani's

**LATE KU DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA.**

**443302.**

(Affiliated to Sant Gadge Baba Amravati University, Amravati; UGC 2  
(f) & 12 B; NAAC Accredited with 'C' grade)

**Department of Mathematics**

**Certificate Course on Quantitative Aptitude**

**Result Sheet**

Sr. No	Name of Student	Internal Score (30)	Exam Score (70)	Total (100)	Remark	Grade
1	Aariyan khan aslam khan	30	44 / 70	74	Pass	A
2	Nitesh Santosh Ingale	30	38 / 70	68	Pass	B
3	Ku.Neha Sahebrao Narwade	30	58 / 70	88	Pass	O
4	Ku.Bhavna Shekhar Bhavan	30	64 / 70	94	Pass	O
5	Ku.Mamta Santosh Khadakkar	30	64 / 70	94	Pass	O
6	Ku.Manisha Anil Sonune	30	40 / 70	70	Pass	B
7	Ku.Ashvini Baban Sarkate	30	64 / 70	94	Pass	O
8	Ku.Radhika Asaram Borkar	30	58 / 70	88	Pass	O
9	Ku.Siddhi Santosh Banmeru	30	62 / 70	92	Pass	O
10	Ku.Qaneta Mehvish Mirza Mehtab	30	44 / 70	74	Pass	A
11	Ku.Diksha Bhagwan Nagre	30	62 / 70	92	Pass	O
12	Ku.Ashwini Rameshwar Sanap	30	50 / 70	80	Pass	A
13	Ku.Vidya Pandurang Sangle	30	68 / 70	88	Pass	O
14	Ku. Vaishnavi Pandhari Sonune	30	42 / 70	72	Pass	A
15	Santosh Tanhaji Wable	30	66 / 70	96	Pass	O
16	Vaibhav Gajanan Ghayal	30	70 / 70	100	Pass	O
17	Laxman Rambhau pophale	30	36 / 70	66	Pass	B
18	Ku.Swati Dashrath Bodkhe	30	58 / 70	88	Pass	O

Anna Sewabhai Santha Patil's  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
(Affiliated to Sant Gadge Baba Ambedkar University, Pravara) - UGC 2 (F) & 12 (B)  
 NAAC Accredited with 'C' Grade




**Department Of Mathematics**  
 This certificate is awarded to  
**Miss. Visha Pambhary Sange**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade **B**

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.




Head  
 Department of Mathematics  
 Principal



Anna Sewabhai Santha Patil's  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
(Affiliated to Sant Gadge Baba Ambedkar University, Pravara) - UGC 2 (F) & 12 (B)  
 NAAC Accredited with 'C' Grade




**Department Of Mathematics**  
 This certificate is awarded to  
**Miss. Vaishali Pambhary Sange**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade **B**

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.




Head  
 Department of Mathematics  
 Principal



Anna Sewabhai Santha Patil's  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
(Affiliated to Sant Gadge Baba Ambedkar University, Pravara) - UGC 2 (F) & 12 (B)  
 NAAC Accredited with 'C' Grade




**Department Of Mathematics**  
 This certificate is awarded to  
**Mr. Yashwanth Ganesan Ghoshal**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade **B**

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.




Head  
 Department of Mathematics  
 Principal



Anna Sewabhai Santha Patil's  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
(Affiliated to Sant Gadge Baba Ambedkar University, Pravara) - UGC 2 (F) & 12 (B)  
 NAAC Accredited with 'C' Grade




**Department Of Mathematics**  
 This certificate is awarded to  
**Miss. Swati Chaitanya Ghoshal**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade **B**

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.




Head  
 Department of Mathematics  
 Principal



Anna Sewabhai Santha Patil's  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
(Affiliated to Sant Gadge Baba Ambedkar University, Pravara) - UGC 2 (F) & 12 (B)  
 NAAC Accredited with 'C' Grade




**Department Of Mathematics**  
 This certificate is awarded to  
**Miss. Smiti Santosh Banerjee**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade **B**

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.




Head  
 Department of Mathematics  
 Principal



Anna Sewabhai Santha Patil's  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
(Affiliated to Sant Gadge Baba Ambedkar University, Pravara) - UGC 2 (F) & 12 (B)  
 NAAC Accredited with 'C' Grade




**Department Of Mathematics**  
 This certificate is awarded to  
**Mr. Santosh Tanuj Wable**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade **B**

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.




Head  
 Department of Mathematics  
 Principal



Arvind Sawabhay Santhra Pathshala's  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
 (Affiliated to Sant Gadge Baba Pravear's University, Amravati) - UGC 2 (F) & 12 (B)  
 WBC Accredited With 'C' Grade

**Department Of Mathematics**  
 This certificate is awarded to  
**Miss. Parvika Anurag Barbar**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade A

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.

 Head  
 Department of Mathematics

 Principal





Arvind Sawabhay Santhra Pathshala's  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
 (Affiliated to Sant Gadge Baba Pravear's University, Amravati) - UGC 2 (F) & 12 (B)  
 WBC Accredited With 'C' Grade

**Department Of Mathematics**  
 This certificate is awarded to  
**Miss. Gunika Mahesh Miska Mahajan**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade A

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.

 Head  
 Department of Mathematics

 Principal





Arvind Sawabhay Santhra Pathshala's  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
 (Affiliated to Sant Gadge Baba Pravear's University, Amravati) - UGC 2 (F) & 12 (B)  
 WBC Accredited With 'C' Grade

**Department Of Mathematics**  
 This certificate is awarded to  
**Ms. Nisha Sunanda Ingole**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade B

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.

 Head  
 Department of Mathematics

 Principal





Arvind Sawabhay Santhra Pathshala's  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
 (Affiliated to Sant Gadge Baba Pravear's University, Amravati) - UGC 2 (F) & 12 (B)  
 WBC Accredited With 'C' Grade

**Department Of Mathematics**  
 This certificate is awarded to  
**Miss. Neha Subhash Marwade**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade B

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.

 Head  
 Department of Mathematics

 Principal





Arvind Sawabhay Santhra Pathshala's  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
 (Affiliated to Sant Gadge Baba Pravear's University, Amravati) - UGC 2 (F) & 12 (B)  
 WBC Accredited With 'C' Grade

**Department Of Mathematics**  
 This certificate is awarded to  
**Miss. Parvika Anil Sonare**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade B

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.

 Head  
 Department of Mathematics

 Principal





Arvind Sawabhay Santhra Pathshala's  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
 (Affiliated to Sant Gadge Baba Pravear's University, Amravati) - UGC 2 (F) & 12 (B)  
 WBC Accredited With 'C' Grade

**Department Of Mathematics**  
 This certificate is awarded to  
**Miss. Manika Suresh Khedekar**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade B

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.

 Head  
 Department of Mathematics

 Principal





Amrit Sevabhai Santhra Parikhani  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
 (Affiliated to Sant Gadge Baba Amraoti University, Amraoti) - UGC 2 (F) & 12 (B)  
 NAAC Accredited With 'C' Grade




**Department Of Mathematics**  
 This certificate is awarded to  
**Mr. Laxman Ramkisan Popalga**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade B

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.



Head  
Department of Mathematics



Principal



Amrit Sevabhai Santhra Parikhani  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
 (Affiliated to Sant Gadge Baba Amraoti University, Amraoti) - UGC 2 (F) & 12 (B)  
 NAAC Accredited With 'C' Grade




**Department Of Mathematics**  
 This certificate is awarded to  
**Miss. Shikha Bhagwan Nagre**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade B

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.



Head  
Department of Mathematics



Principal



Amrit Sevabhai Santhra Parikhani  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
 (Affiliated to Sant Gadge Baba Amraoti University, Amraoti) - UGC 2 (F) & 12 (B)  
 NAAC Accredited With 'C' Grade




**Department Of Mathematics**  
 This certificate is awarded to  
**Miss. Shweta Sheshwar Shinde**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade B

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.



Head  
Department of Mathematics



Principal



Amrit Sevabhai Santhra Parikhani  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
 (Affiliated to Sant Gadge Baba Amraoti University, Amraoti) - UGC 2 (F) & 12 (B)  
 NAAC Accredited With 'C' Grade




**Department Of Mathematics**  
 This certificate is awarded to  
**Miss. Anshu Raksha Kumbhar**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade B

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.



Head  
Department of Mathematics



Principal



Amrit Sevabhai Santhra Parikhani  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
 (Affiliated to Sant Gadge Baba Amraoti University, Amraoti) - UGC 2 (F) & 12 (B)  
 NAAC Accredited With 'C' Grade




**Department Of Mathematics**  
 This certificate is awarded to  
**Miss. Anshu Ramkisan Sonay**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade B

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.



Head  
Department of Mathematics



Principal



Amrit Sevabhai Santhra Parikhani  
**Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana (M.S.)**  
 (Affiliated to Sant Gadge Baba Amraoti University, Amraoti) - UGC 2 (F) & 12 (B)  
 NAAC Accredited With 'C' Grade




**Department Of Mathematics**  
 This certificate is awarded to  
**Santoshkumar Adam Khan**

For Successfully Completing the Certificate Course on  
**QUANTITATIVE APTITUDE**  
 With Grade B

Organized By Department Of Mathematics Of Late Ku. Durga K. Banmeru Science College, Lonar, Dist- Buldana, Held During Jan 16 - Mar 12, 2020.



Head  
Department of Mathematics



Principal



Amrut Sevabhavi Sanstha, Parbhani's



**LATE KU DURGA K. BANMERU SCIENCE COLLEGE,  
LONAR, DIST. BULDANA. 443302.**

(Affiliated to Sant Gadge Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Botany**



Value Added Certificate Course in

**“HERBAL MEDICINE”**



By

**Department of Botany,**

**Late Ku. Durga K. Banmeru Science College,  
Lonar, Dist. Buldana. Pin. 443302.**

**Dec, 2019**

ADVENTURE FOREVER  
**LONAR CRATER LAKE**

**LATE KU DURGA K. BANMERU SCIENCE COLLEGE,  
LONAR, DIST. BULDANA. 443302.**

(Affiliated to Sant Gadge Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Botany**

---

**Course Objectives**

- To develop the students for establishing the small scale Pharmaceutical Industry for production of Herbal Drugs.
- To encourage the students for Medicinal Plant farming.
- To inculcate the economic status of students.
- To conserve the traditional knowledge & folk medicine.
- To understand the advance instruments, formulation & its application in drug analysis.

**Scope & Course Outcome**

Upon completion of the course, the students shall be able to know the:

- Basic of Herbal Plant identification, plant parts, Classification of Drugs, Cultivation of Medicinal Plants, and Harvesting & Storage
- The course also covers the important aspects of ethno-medicine, traditional medicines & formulation, traditional system of therapy, preparation of herbal formulation.
- Ethno-medicine & folk medicine
- Knowledge of routinely used Ayurvedic & rare herbal drug plants & their parts
- Application & economic importance of Medicinal Plant
- Conservation strategies & sustainable utilization of Herbal Medicinal Plants.



**LATE KU DURGA K. BANMERU SCIENCE COLLEGE,  
LONAR, DIST. BULDANA. 443302.**

(Affiliated to Sant Gadge Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Botany**

---

## Syllabus

### **Unit I: General Introduction & Identification of Local Herbal Medicine**

Definition & History, scope of Herbal Medicine; System of Indian Medicines; Ayurveda, Homeopathy; Classification of crude drugs; Identification, local name, Botanical Name of Medicinal Plants.

### **Unit II: Traditional Uses of Herbal Medicine**

Traditional knowledge & utility of some medicinal plants; Medicinally used plant parts: Roots, Stem, Barks, Leaves, Flowers, Fruits, Seeds; Ethno-medicine, Folk Medicine.

### **Unit III: Cultivation & Harvesting Management**

Common cultivation Methods for local & rare herbal Medicinal Plants; Mass production of crude drugs; Harvesting of Medicinally used plant parts; Storage & Preservation.

### **Unit IV: Processing & formulation of Herbal Drugs**

Introduction to Ayurvedic formulation with methods of preparation: Churna, Vati, Asava, Arishta, Taila & Bhasma; Preparation of Herbal Infusions: Decoctions, Lotions, Syrups, Pouties, Ointments, Oils.

### **Unit V: Application & Doses of Herbal Medicine**

Methods of Disease Diagnosis & treatment; Application methods of common Herbal Medicinal Plants; Quality control & doses on particular diseases.

### **Unit VI: Conservation Strategies & Future Prospecting**

Sustainable utility of Rare Herbal Plants, Conservation Strategies & Future Prospecting of Herbal Medicinal Plants.



**LATE KU DURGA K. BANMERU SCIENCE COLLEGE,  
LONAR, DIST. BULDANA. 443302.**

(Affiliated to Sant Gadge Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Botany**

## Teaching & Examination Scheme

Course	Teaching workload	Exam		Grade System
		Theory (40 Marks)	Practical (60 Marks)	
Certificate Course in "Herbal Medicine"	4 Lectures 1 Practical per week	20 Multiple Choice Question (each for 2 Marks)	4 practical	Marks 100-81: O Grade 80-71: A Grade 70-61: B Grade 60-51: C Grade 50-00: Fail

## Recommended Books/ References

- Indian Medicinal Plants by Vaidya Ratnam & P.S. Varires, Arya Vaidya Sale vol-4
- Ayurvedic Pharmacology & Therapeutic uses of Medicinal plants by Vaidya V. M. Gogte
- Medicinal Plants of India by Lal S. N.
- Charak Samhita on Ayurvedic text by Govt. of India
- Handbook of Medicinal Herbs by S. Bhattacharya
- The ayurvedic Pharmacopia of India by Govt. of India vol-5
- Indian Medicinal Plants- An Illustrated Medical Dictionary
- Economic Botany by Pande B. P.
- Economic Botany by Sen S.
- Cultivation of Medicinal Plants by C. K. Atal & B. M. Kapoor
- Database on Medicinal Plants Used in Ayurveda by K.V. Billore, M.B. Velne, T.J. Dennis & B.G. Chaudhari
- Encyclopedia Of Herbal Medicine: 550 Herbs and Remedies for Common Ailments Hardcover by Andrew Chevallier
- Handbook Of Medicinal Plants by U. S. Bose, Oxford Book Company

**LATE KU DURGA K. BANMERU SCIENCE COLLEGE,  
LONAR, DIST. BULDANA. 443302.**

(Affiliated to Sant Gadge Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Botany**

- Medicinal Plants Chemistry And Properties by Daniel M., Oxford & IBH Publishing Co.
- Medicinal Plants of India by Neeru Mathur, RBSA Publishers
- Cultivation of Medicinal & Aromatic Crops by A. A. Farooqi & B.S. Sreeramu, University Press
- Handbook of Herbal Medicinal Plants by L.D. Kapoor, Herbal Reference Library
- Identification of Common Indian Medicinal Plants by V. N. Naik, Scientific Publisher, Jodhpur, India
- Ethnobotany & Medicinal Plants of India & Nepal by V. Singh, Scientific Publisher, Jodhpur, India

HOD

Principal





**LATE KU DURGA K. BANMERU SCIENCE COLLEGE,  
LONAR, DIST. BULDANA. 443302.**

(Affiliated to SantGadage Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Botany**



**Value Added Certificate Course in**

**“HERBAL MEDICINE”**

**Students Enrolled for Certificate Course**

**AY 2019-20**

<b>Sr. No.</b>	<b>Name of Student</b>	<b>Class</b>
01	Akash Kale	B. Sc. III
02	Vaibhav Hade	B. Sc. III
03	Akshay Gelda	B. Sc. III
04	Arati Ganjare	B. Sc. III
05	Avantika Nichang	B. Sc. III
06	Azqua Sabeen	B. Sc. III
07	Dhanashree Dole	B. Sc. III
08	Dhiraj Hade	B. Sc. III
09	Dipak Padmavat	B. Sc. III
10	Mangesh Hade	B. Sc. III
11	Nikita Dugad	B. Sc. III
12	Pooja Mapari	B. Sc. III
13	Priyanka More	B. Sc. III
14	Rohini Bodakhe	B. Sc. III
15	Sachin Gawali	B. Sc. III
16	Sagar Davhale	B. Sc. III
17	Shaikh Mufiz Shaikh Kabir	B. Sc. III
18	Shweta Adhao	B. Sc. III
19	Simran Aktar Khan	B. Sc. III
20	Akash Tatte	B. Sc. III

**MEMORANDUM OF UNDERSTANDING (MOU)**

**BETWEEN**

**LATE KU. DURGA K. BANMERU SCIENCE COLLEGE,  
LONAR, DIST. BULDHANA. 443302.**

**&**

**SWARANSH HERBOTECH LLP,  
ALOE VERA PROCESSING INDUSTRY, LONAR**

**FOR**

**SKILL DEVELOPMENT, OUTCOME BASED  
TRAININGS, PLACEMENT, R&D SERVICES AND  
RELATED SERVICES**

## MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (hereinafter called as the 'MOU') is entered into on this the DAY OF Sept – Two Thousand and Twenty ( /09/2020), by and between

**LATE KU. DURGA K. BANMERU SCIENCE COLLEGE, LONAR, THE FIRST PARTY** represented herein by its **Dr. Prakash K. Banmeru** (hereinafter referred as 'First Party', the institution which expression, unless excluded by or repugnant to the subject or context shall include its successors – in-office, administrators and assigns).

AND

**SWARANSH HERBOTECH LLP, ALOE VERA PROCESSING INDUSTRY, LONAR, THE SECOND PARTY**, and represented herein by its Managing Director, **Dr. (Mrs.) Varsha Ashwin Mapari**, (hereinafter referred to as "Second Party", company which expression, unless excluded by or repugnant to the subject or context shall include its successors – in-office, administrators and assigns).

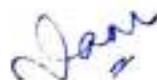
(First Party and Second Party are hereinafter jointly referred to as 'Parties' and individually as 'Party') as:

### WHEREAS:

- A) First Party is a Higher Educational Institution named:
- (I) **LATE KU. DURGA K. BANMERU SCIENCE COLLEGE, LONAR**
- B) First Party & Second Party believe that collaboration and co-operation between themselves will promote more effective use of each of their resources, and provide each of them with enhanced opportunities.
- C) The Parties intent to cooperate and focus their efforts on cooperation within area of **Skill Based Training, Education and Research.**
- D) Both Parties, being legal entities in themselves desire to sign this MOU for advancing their mutual interests.
- E) **SWARANSH HERBOTECH LLP, ALOE VERA PROCESSING INDUSTRY, LONAR**, the Second Party is engaged in Business, Manufacturing, Skill Development, Education and R &D Services in the fields of **Aloe vera Processing Industry, Herbal Medicines/ Products** and related fields.



First Party



Second Party

- F) **SWARANSH HERBOTECH LLP, ALOE VERA PROCESSING INDUSTRY, LONAR**, the Second Party is promoted by **Dr. (Mrs.) Varsha Ashwin Mapari & Group, Lonar**.
- G) Related information: The Second Party has well established Aloe Vera Processing Unit, who purchase & Process the *Aloe vera* from number of farmers. It has its own well trained qualified staff and engaged with to conduct the training program for freshers.

**NOW THEREFORE, IN CONSIDERATION OF THE MUTUAL PROMISES SET FORTH IN THIS MOU, THE PARTIES HERE TO AGREE AS FOLLOWS:**

**CLAUSE 1  
CO-OPERATION**

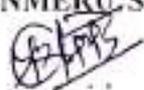
- 1.1 Both Parties are united by common interests and objectives, and they shall establish channels of communication and co-operation that will promote and advance their respective operations within the **Institution** and its related wings. The Parties shall keep each other informed of potential opportunities and shall share all information that may be relevant to secure additional opportunities for one another.
- 1.2 First Party and Second Party co-operation will facilitate effective utilization of the intellectual capabilities of the faculty of First Party providing significant inputs to them in developing suitable teaching / training systems, keeping in mind the needs of the industry, the Second Party.
- 1.3 The general terms of co-operation shall be governed by this MOU. The Parties shall cooperate with each other and shall, as promptly as is reasonably practical, enter into all relevant agreements, deeds and documents (the 'Definitive Documents') as may be required to give effect to the actions contemplated in terms of this MOU. The term of Definitive Documents shall be mutually decided between the Parties. Along with the Definitive Documents, this MOU shall represent the entire understanding as to the subject matter hereof and shall supersede any prior understanding between the Parties on the subject matter hereof.

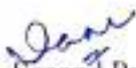
**CLAUSE 2  
SCOPE OF THE MoU**

  
First Party

  
Second Party

- 2.1 The budding graduates from the institutions could play a key role in technological up-gradation, innovation and competitiveness of an industry. Both parties believe that close co-operation between the two would be of major benefit to the student community to enhance their skills and knowledge.
- 2.2 **Curriculum Design:** Second Party will give valuable inputs to the First Party in teaching / training methodology and suitably customize the curriculum so that the students fit into the industrial scenario meaningfully.
- 2.3 **Industrial Training & Visits:** Industry and Institution interaction will give an insight in to the latest developments / requirements of the industries; the Second Party to permit the Faculty and Students of the First Party to visit its group companies and also involve in Industrial Training Programs for the First Party. The industrial training and exposure provided to students and faculty through this association will build confidence and prepare the students to have a smooth transition from academic to working career. The Second Party will provide its Labs / Workshops / Industrial Sites for the hands-on training of the learners enrolled with the First Party.
- 2.4 **Research and Development:** Both Parties have agreed to carry out the joint research activities in the fields of Herbal Medicine.
- 2.5 **Skill Development Programs:** Second Party to train the students of First Party on the emerging technologies in order to bridge the skill gap and make them industry ready.
- 2.6 **Guest Lectures:** First Party & Second Party to extend the necessary support to deliver guest lectures to the students of the First Party on the technology trends and in house requirements.
- 2.7 **Faculty Development Programs:** First Party & Second Party to train the Faculties of First Party for imparting training as per the industrial requirement considering the National Occupational Standards in concerned sector, if available.
- 2.8 **Placement of Trained Students:** Second Party will actively engage to help the delivery of the training and placement of students of the First Party into internships/jobs.
- 2.9 Both Parties to obtain all internal approvals, consents, permissions, and licenses of whatsoever nature required for offering the Programmes on the terms specified herein
- 2.10 There is no financial commitment on the part of the LATE KU. DURGA K. BANMERU SCIENCE COLLEGE, LONAR, the First Party to take up any

  
First Party

  
Second Party

Page | 4

programme mentioned in the MoU. If there is any financial consideration, it will be dealt separately.

**CLAUSE 3**  
**INTELLECTUAL PROPERTY**

3.1 Nothing contained in this MOU shall, by express grant, implication, Estoppel or otherwise, create in either Party any right, title, interest, or license in or to the intellectual property (including but not limited to know-how, inventions, patents, copy rights and designs) of the other Party.

**CLAUSE 4**  
**VALIDITY**

- 4.1 This Agreement will be valid until it is expressly terminated by either Party on mutually agreed terms, during which period **SWARANSH HERBOTECH LLP, ALOE VERA PROCESSING INDUSTRY, LONAR**, the Second Party, as the case may be, will take effective steps for implementation of this MOU. Any act on the part of **SWARANSH HERBOTECH LLP, ALOE VERA PROCBSSING INDUSTRY, LONAR**, the Second Party after termination of this Agreement by way of communication, correspondence etc., shall not be construed as an extension of this MOU.
- 4.2 Both Parties may terminate this MOU upon 30 calendar days' notice in writing. In the event of Termination, both parties have to discharge their obligations.

**CLAUSE 5**  
**RELATIONSHIP BETWEEN THE PARTIES**

5.1 It is expressly agreed that **First Party** and **Second Party** are acting under this MOU as independent contractors, and the relationship established under this MOU shall not be construed as a partnership. Neither Party is authorized to use the other Party's name in any way, to make any representations or create any obligation or liability, expressed or implied, on behalf of the other Party, without the prior written consent of the other Party. Neither Party shall have, nor represent itself as having, any authority under the terms of this MOU to make agreements of any kind in the name of or binding upon the other Party, to pledge the other Party's credit, or to extend credit on behalf of the other Party.

  
First Party

(Authorized Signature)

First Party

  
Second Party

(Authorized Signature)

**Swaransh Herbotech L.L.F.**  
**Designated Partner / Aus**

Second Party

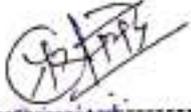
Any divergence or difference derived from the interpretation or application of the MoU shall be resolved by arbitration between the parties as per the Arbitration Act, 1996. The place of the arbitration shall be at District Head Quarters of the First Party. This undertaking is to be construed in accordance with Indian Law with exclusive jurisdiction in the Courts of Lonar.

**AGREED:**

For LATE KU. DURGA K. BANMERU  
SCIENCE COLLEGE, LONAR

Date - 28.09.2020

For SWARANSH HERBOTECH LLP,  
ALOE VERA PROCESSING  
INDUSTRY, LONAR INDUSTRY,  
LONAR

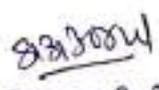
  
Principal  
Late (Dr. P. K. Banmeru)  
Science College, Lonar  
Dist. Buldhana

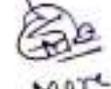
  
(Dr. (Mrs.) Varsha A. More)  
**Swaranah Herbotech LLP.**  
**Designated Partner / Aus**

Name of Institution: LATE KU. DURGA K. BANMERU SCIENCE COLLEGE, LONAR	Name of Industry: SWARANSH HERBOTECH LLP, ALOE VERA PROCESSING INDUSTRY, LONAR
Address: Loni Road, Lonar, Dist. Buldhana. 443302.	Address: Hirdav Road, Lonar, Dist. Buldana, 443302.
Contact Details: (07260) 221315	Contact Details: 9604440700
E-mails: lkdkbscl@rediffmail.com	E-mails:
Web: www.lkdkbanmerucollege.ac.in	Web:

Witness 1:   
Blubemir.

Witness 3:   
(A.R. Banmeru)

Witness 2:   
Pr. S. B. Bond

Witness 4:   
(More. S.P)



Amrut Seva Bhavi Sanstha Parbhani's

**Late Ku. Durga K. Banmeru Science College, Lonar, Dist. Buldana. 443302.**

(Affiliated to Sant Gadge Baba Amravati University, Amravati; UGC 2 (f) & 12 B; NAAC Accredited "C" Grade)



## Department of Botany

Organize

Online Webinar for

**Certificate Course in "HERBAL MEDICINES"**

on 30<sup>th</sup> July, 2020 at 11 am

### Resource Persons



**Prof. Sushilkumar A. Shinde**

Dept. of Pharmacognosy, Dr. Rajendra Gode College of Pharmacy, Malkapur.

**Topic:** Preparation, formulation & Standardization of Herbal Drugs



**Dr. Pravin K. Banmeru**

Banmeru Ayurvedic Panchkarm Chikitsalaya, Jalana.

**Topic:** Applications, Doses & Scope of Herbal Drugs



**Dr. Sapana R. Waghmare**

Ayurvedic Panchkarm Chikitsalaya, Jalana.

**Topic:** Methods of Disease Diagnosis, treatment & Conservation Strategies for Herbal Drugs

❖ **Registration Link:** <https://forms.gle/oZr4kbG87mkLdnzB6>

❖ The webinar will be conduct on **Google Meet:** <https://meet.google.com/jmx-rywg-vzt>

❖ Webinar is only for Students

Organizer

**Dr. Mahendra R. Bhise**

HOD

**Dr. Prakash K. Banmeru**

Principal

Department of Botany

Late Ku. Durga K. Banmeru Science College, Lonar. Dist Buldana.

For any query: Mo. 9420813844 e-mail: mahendrabhise17@gmail.com



Meet - jms-rywg-ctf

meet.google.com/jms-rywg-ctf?pli=1&authuser=0

Sushilkumar Shinde is presenting

Vaishnavi Amode and 70 more

11:18 AM

## AYURVEDA- INDIAN SYSTEM OF MEDICINE

◆ In India it is an old system of treatment. It is 5500 years old. The word Ayurveda derived from two words i.e. "Ayur" meaning "Life" and "Veda" meaning "Science". Thus "Ayurveda" means "Science of Life".

◆ According to Indian Hindu Mythology there are four Vedas written by Aryans, i.e. **Rig-veda, Sham-veda, Yajur-veda and Atharva-veda**. Ayurveda is a part of Atharva-veda.

According to Ayurveda, Health is defined as the balance state of **Tridoshas** i.e. Vata, Pitta and Kapha in the body, which is responsible for normal physiology of body and healthy condition of mind. Drugs of Ayurveda are obtained mostly from plants.

SAPNA WAGHMARE has left the meeting

Meeting details

Turn on captions

Sushilkumar Shinde is presenting

Meet - jms-rywg-ctf

meet.google.com/jms-rywg-ctf?pli=1&authuser=0

Sushilkumar Shinde is presenting

### ASAVA AND ARISHTA

Asava and Arishta are very important dosage forms of Ayurveda. They contain naturally generated alcohol. This alcohol acts as the medium for active ingredients of the herbs to dissolve in it. In general, all Asava and Arishta have 5-10 % of alcohol. Though these Ayurvedic medicines contain alcohol, they are quite safe to prescribe and to consume.

**Method of Preparation of Arishta:**

- ◆ First Kashaya is prepared by boiling herbs in water and filtered.
- ◆ To this filtered kashaya, specified amount of jaggery (gud) or sugar candy or honey is added. Mixed it well and then filtered it again.
- ◆ To this, fermenting agent i.e. Dhankai flower (*Woodfordia fruticosa*) or Madhaka flower (*Madhaca indica*) is added.
- ◆ To this above Prkashpa Dravya, certain spices like black pepper, long pepper, clove, cinnamon etc are added.
- ◆ Transformed it into the closed vessel at any place where temperature is around 35°C.

Meeting details

Turn on captions

Sushilkumar Shinde is presenting

Meeting details

People (75)

Chat

- Soni Takshade
- Sushilkumar Shinde
- Sushilkumar Shinde (Presentat...
- Swagati Gewande
- Devas parve
- TEJASWINI SHELE
- Vaibhav Nade
- Vaishnavi Amode
- Vidya Sattigoudar

Sushilkumar Shinde is presenting

• This is tested with the help of a ladle to determine the paaka (cooking stage). The paaka is categorized into mridu (soft), if the paste is waxy when rolled between fingers, madhyama (moderate), if the paste is hard and fires without cracking noise when put in to fire and khara (hard), if it burns with cracking sound when placed in fire.

• The ideal condition of the medicated oil is attained when uniform froth comes out and subsides in case of medicated ghee.

• Taila can be used internally and topically. They retain potency for about sixteen months. They are taken internally with warm water or warm milk.

**Example of Taila:** Bhartugvaj taila, Maha Narayan taila, Laghu Visagabha taila, Anu-taila, Jyotismati taila, etc.

People (65)

Add people

- Dr. Mahendra Bhoje (You)
- atish praitgade
- Aishwarya Potti
- Akhilash ramteke
- Anand Takade
- Apurva Mand
- Arna Raj
- Asha bhagwale
- Aaratika Nishang
- Darshana

Khodja Sarkar has left the meeting

meet - jmytng-ott

meet.google.com/jmytng-ott?hl=en&authuser=0

Meeting details

People (31)

11:21 AM  
all participants you can mute your video also so as to increase quality of meeting

You 11:47 AM  
dear participants if you have any question, you can post your question here in chat box

Prakash Sameru 11:49 AM  
Very nice organization

You 12:01 PM  
Dear participants we have two more interesting lecture on Coaxase diagnosis & application of herbal medicine. so do not left earlier from the webinar

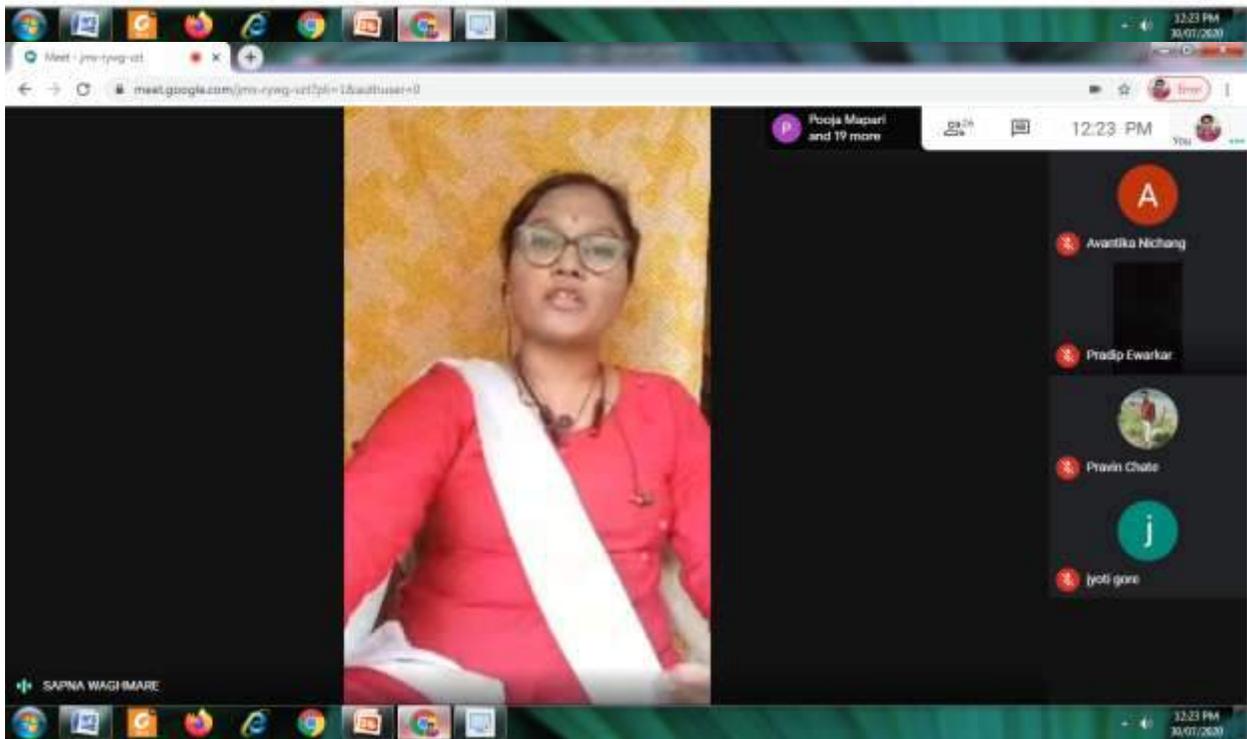
Pravin Chate 12:02 PM  
Osh. sh

Send a message to everyone

Meeting details

Turn on captions Present now

12:01 PM 30/07/2020



Meet - jm-rywq-xtf

meet.google.com/jm-rywq-xtf?pli=1&authuser=0

Meeting details

People (23) Chat

Add people

- Dr. Mahendra Bhoir (You)
- Aishwarya Patil
- Akhilesh ramrma
- Asha bagawale
- Avantika Nichang
- Ghanashree Hazare
- Chiraj Haste
- Dinkar Dole
- Dr. Mahendra Bhoir (Thursday, July 26, 2020)

prveen baneru

12:39 PM 26/07/2020

Meet - jm-rywq-xtf

meet.google.com/jm-rywq-xtf?pli=1&authuser=0

Meeting details

People (23) Chat

Add people

- Dr. Mahendra Bhoir (You)
- Aishwarya Patil
- Akhilesh ramrma
- Asha bagawale
- Avantika Nichang
- Ghanashree Hazare
- Chiraj Haste
- Dinkar Dole
- Dr. Mahendra Bhoir

prveen baneru

Limited-time Offer

12:39 PM 26/07/2020

Meet - jmn-rywg-xtl

meet.google.com/jmn-rywg-xtl?pli=1&authuser=0

Meeting details

People (24) Chat

- priyanka salunkhe
- prveen barmanu
- SAPNA WASHMARE
- Shivhanika More
- Shreya Dalwad
- Shweta Adhar
- Sushikumar Shinde
- swati bisen
- Vidya Battigodar
- Vidyasree Ugari

prveen barmanu

12:42 PM 30/07/2020

Meet - jmn-rywg-xtl

Feedback form Webinar for "C" x

meet.google.com/jmn-rywg-xtl?pli=1&authuser=0

Meeting details

People (24) Chat

You 12:51 PM  
Dear participants,  
Please give you valuable feedback on today's webinar on HERBAL MEDICINE.  
Click on below link After submitting feedback You will get Participation E-certificate on your Email.  
<https://forms.gle/9uJUNCIvMkSpJ3>  
Thanks & Regards  
Dr. Mahendra R. Shree  
HOD, Dept of Botany  
Late P. Durga K. Barmanu Science College,  
Laner Dist. Buldana.

DHANANJAY MURKULE 12:51 PM  
Very nice useful and informative session.

Meeting details

Turn on captions Present now

1:01 PM 30/07/2020

Meet - jmn-rywg-vst | Feedback Form Webinar for ...

meet.google.com/jmn-rywg-vst?pli=1&authuser=0

Meeting details

People (24)

Chat

You 12:30 PM  
Dear participants,  
Please give you valuable feedback on today's webinar on HERBAL MEDICINE.  
Click on below link After submitting feedback You will get Participation E-certificate on your Email.  
<https://forms.gle/9uJNCVvMk5pJ59>  
Thanks & Regards  
Dr. Mahendra R. Bhave  
HOD, Dept of Botany  
Late K. Durga K. Barmans Science College,  
Laner Dist. Buldana

DHANANJAY MENDKULE 12:31 PM  
Very nice useful and informative session

Meeting details

Turn on captions

Present now

Send a message to everyone

1:01 PM  
30/07/2020

Meet - jmn-rywg-vst | you take all in one share - Doc...

meet.google.com/jmn-rywg-vst?authuser=0

Meeting details

People (9)

Chat

You 2:07 PM  
Dear participants,  
Please give you valuable feedback on today's webinar on HERBAL MEDICINE.  
Click on below link After submitting feedback You will get Participation E-certificate on your Email.  
<https://forms.gle/9uJNCVvMk5pJ59>  
Thanks & Regards  
Dr. Mahendra R. Bhave  
HOD, Dept of Botany  
Late K. Durga K. Barmans Science College,  
Laner Dist. Buldana

Pradip Ewarke 2:07 PM  
Very nice educational information

meeting.google.com + New

You're presenting to everyone  
Click here to return to the video call when you're ready to stop presenting

2:07 PM  
30/07/2020

Meet - jms-rywq-xtl

meet.google.com/jms-rywq-xtl?authuser=0

Meeting details

People (8)

You 2:07 PM  
Dear participants,  
Please give you valuable feedback on today's webinar on HERBAL MEDICINE.  
Click on below link After submitting feedback You will get Participation E-certificate on your Email.  
<https://forms.gle/5UJNC1VMAK6J9>  
Thanks & Regards  
Dr. Mahendra R. Bhave  
HOD, Dept of Botany  
Late K. Durga K. Bahmani Science College,  
Laner Dist. Buldhana.

Pradip Ewarar 2:07 PM  
Very nice educational information

2:07 PM  
30/07/2020

Meet - jms-rywq-xtl

meet.google.com/jms-rywq-xtl?pli=1&authuser=0

Meeting details

People (24)

- priyanka salunkhe
- prveen barmetu
- SAPNA WADHARE
- Shreshankar More
- Shriya Galkwad
- Shweta Adhar
- Sushikumar Shinde
- swati bisen
- Vidya Battigodar
- Vidyaashree Ugani

Meeting details

Turn on captions

Present now

12:42 PM  
30/07/2020



Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadge Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)

**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**

This is to certify that,

**Miss. Shweta Vilas Adhao** B.Sc. III Sem VI



Successfully completed Six weeks Certificate Course in "Herbal Medicines"  
conducted by Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar. Dist. Buldana. Maharashtra. He/ She has earned 80% score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**  
HOD

**Dr. Prakash K. Banmeru**  
Principal

Cert ID Bot/Med/2020/1



Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadge Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)

**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**

This is to certify that,

**Miss. Pooja Ramesh Mapari** B.Sc. III Sem VI



Successfully completed Six weeks Certificate Course in "**Herbal Medicines**"  
conducted by **Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar.** Dist. Buldana. Maharashtra. He/ She has earned **72%** score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**  
HOD

**Dr. Prakash K. Banmeru**  
Principal

Cert ID Bot/Med/2020/2





Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadge Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)

**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**



This is to certify that,

**Miss. Nikita Anil Dugad** B.Sc. III Sem VI

Successfully completed Six weeks Certificate Course in "**Herbal Medicines**"  
conducted by **Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar, Dist. Buldana, Maharashtra.** He/ She has earned **50%** score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**  
HOD

**Dr. Prakash K. Banmeru**  
Principal

Cert ID Bot/Med/2020/3



Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadge Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)

**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**



This is to certify that,

**Mr. Dipak Shankar Padmayat B.Sc. III Sem VI**

Successfully completed Six weeks Certificate Course in "**Herbal Medicines**"  
conducted by **Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar. Dist. Buldana. Maharashtra.** He/ She has earned **80%** score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**  
HOD

**Dr. Prakash K. Banmeru**  
Principal

Cert ID Bot/Med/2020/4



Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadage Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)

**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**



This is to certify that,

**Mr. Sagar Dattatray Dayhale** B.Sc. III Sem VI



Successfully completed Six weeks Certificate Course in "Herbal Medicines"  
conducted by Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar. Dist. Buldana. Maharashtra. He/ She has earned **76%** score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**  
HOD

**Dr. Prakash K. Banmeru**  
Principal

Cert ID Bot/Med/2020/5





Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadge Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)

**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**

This is to certify that,

**Mr. Akash Vijaykumar Tatte** B.Sc. III Sem VI



Successfully completed Six weeks Certificate Course in "Herbal Medicines"  
conducted by Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar. Dist. Buldana. Maharashtra. He/ She has earned **68%** score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**  
HOD

**Dr. Prakash K. Banmeru**  
Principal

Cert ID Bot/Med/2020/6





Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadge Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)



**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**

This is to certify that,

**Mr. Vaibhav Madhav Hade** B.Sc. III Sem VI



Successfully completed Six weeks Certificate Course in "Herbal Medicines" conducted by Department of Botany, Late Ku. Durga K. Banmeru Science College, Lonar. Dist. Buldana. Maharashtra. He/ She has earned 60% score in Exam conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**

HOD

**Dr. Prakash K. Banmeru**

Principal

Cert ID Bot/Med/2020/7





Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadge Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)



**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**

This is to certify that,

**Mr. Sachin Subhash Gawali** B.Sc. III Sem VI

Successfully completed Six weeks Certificate Course in "Herbal Medicines"  
conducted by Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar. Dist. Buldana. Maharashtra. He/ She has earned 50% score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**  
HOD

**Dr. Prakash K. Banmeru**  
Principal

Cert ID Bot/Med/2020/8



Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadge Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)

**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**

This is to certify that,

**Mr. Dhiraj Wamanrao Hade** B.Sc. III Sem VI

Successfully completed Six weeks Certificate Course in "Herbal Medicines"  
conducted by Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar. Dist. Buldana. Maharashtra. He/ She has earned **76%** score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**  
HOD

**Dr. Prakash K. Banmeru**  
Principal

Cert ID Bot/Med/2020/9





Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadge Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)



**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**

This is to certify that,

**Mr. Akash Madhav Kale** B.Sc. III Sem VI

Successfully completed Six weeks Certificate Course in "Herbal Medicines"  
conducted by Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar. Dist. Buldana. Maharashtra. He/ She has earned 50% score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**  
HOD

**Dr. Prakash K. Banmeru**  
Principal

Cert ID Bot/Med/2020/10



Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadage Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)



**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**

This is to certify that,

**Miss. Simran Akhtar Khan** B.Sc. III Sem VI

Successfully completed Six weeks Certificate Course in "**Herbal Medicines**"  
conducted by **Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar.** Dist. Buldana. Maharashtra. He/ She has earned **52%** score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**

HOD

**Dr. Prakash K. Banmeru**

Principal

Cert ID Bot/Med/2020/11



Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadge Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)

**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**

This is to certify that,

**Miss. Dhanashree Dinkar Dole** B.Sc. III Sem VI



Successfully completed Six weeks Certificate Course in "Herbal Medicines"  
conducted by Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar. Dist. Buldana. Maharashtra. He/ She has earned 88% score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**  
HOD

**Dr. Prakash K. Banmeru**  
Principal

Cert ID Bot/Med/2020/12





Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadge Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)



**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**

This is to certify that,

**Mr. Shaikh Mufiz Shaikh Kabir** B.Sc. III Sem VI

Successfully completed Six weeks Certificate Course in "**Herbal Medicines**"  
conducted by Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar. Dist. Buldana. Maharashtra. He/ She has earned **68%** score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**

HOD

**Dr. Prakash K. Banmeru**

Principal

Cert ID Bot/Med/2020/13



Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadge Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)



**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**

This is to certify that,

**Miss. Priyanka Suresh More** B.Sc. III Sem VI

Successfully completed Six weeks Certificate Course in "**Herbal Medicines**"  
conducted by **Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar.** Dist. Buldana. Maharashtra. He/ She has earned **84%** score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**

HOD

**Dr. Prakash K. Banmeru**

Principal

Cert ID Bot/Med/2020/14



Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadge Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)



**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**

This is to certify that,

**Miss. Avantika Ashok Nihang** B.Sc. III Sem VI

Successfully completed Six weeks Certificate Course in "**Herbal Medicines**"  
conducted by **Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar.** Dist. Buldana. Maharashtra. He/ She has earned **72%** score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**

HOD

**Dr. Prakash K. Banmeru**

Principal

Cert ID Bot/Med/2020/15



Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadge Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)



**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**

This is to certify that,

**Miss. Azqua sabeen turab Ali Siddiqui** B.Sc. III Sem VI

Successfully completed Six weeks Certificate Course in "Herbal Medicines"  
conducted by Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar. Dist. Buldana. Maharashtra. He/ She has earned **60%** score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**  
HOD

**Dr. Prakash K. Banmeru**  
Principal

Cert ID Bot/Med/2020/16



Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadage Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)



**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**

This is to certify that,

**Mr. Akshay Ajitkumar Gelda** B.Sc. III Sem VI

Successfully completed Six weeks Certificate Course in "**Herbal Medicines**"  
conducted by Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar. Dist. Buldana. Maharashtra. He/ She has earned **50%** score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**  
HOD

**Dr. Prakash K. Banmeru**  
Principal

Cert ID Bot/Med/2020/17



Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadge Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)



**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**

This is to certify that,

**Mr. Mangesh Chhagan Hade** B.Sc. III Sem VI

Successfully completed Six weeks Certificate Course in "Herbal Medicines"  
conducted by Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar. Dist. Buldana. Maharashtra. He/ She has earned **56%** score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**  
HOD

**Dr. Prakash K. Banmeru**  
Principal

Cert ID Bot/Med/2020/18



Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadge Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)



**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**

This is to certify that,

**Miss. Arati Bhaskar Ganjare** B.Sc. III Sem VI

Successfully completed Six weeks Certificate Course in "**Herbal Medicines**"  
conducted by Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar. Dist. Buldana. Maharashtra. He/ She has earned **50%** score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**  
HOD

**Dr. Prakash K. Banmeru**  
Principal

Cert ID Bot/Med/2020/19



Amrut Sevabhavi Sanstha Parbhani's

**LATE KU. DURGA K. BANMERU SCIENCE  
COLLEGE, LONAR, DIST. BULDANA. 443302(M.S.)**

(Affiliated to Sant Gadge Baba Amravati University Amravati; UGC 2 (f) & 12 B; NAAC Accredited with 'C' grade)



**Department of Botany**

**Certificate Course in "HERBAL MEDICINES"**

**Certificate of Course Completion**

This is to certify that,

**Miss. Rohini Tanhaji Bodkhe** B.Sc. III Sem VI

Successfully completed Six weeks Certificate Course in "Herbal Medicines"  
conducted by Department of Botany, Late Ku. Durga K. Banmeru Science College,  
Lonar. Dist. Buldana. Maharashtra. He/ She has earned **72%** score in Exam  
conducted on date: 07/08/2020.

**Dr. Mahendra R. Bhise**  
HOD

**Dr. Prakash K. Banmeru**  
Principal

Cert ID Bot/Med/2020/20

AmrutSevabhaviSanstha, Parbhani's



**LATEKUDURGAK.BANMERUSCIENCECOLLEGE,  
LONAR, DIST. BULDANA.443302.**

(Affiliated to Sant Gadage Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Mathematics**



**Certificate Course on  
Quantitative Aptitude**



**By**

**Department of Mathematics,**

**LateKu.DurgaK.BanmeruScienceCollege,Lonar,**

**Dist. Buldana. Pin.443302.**

**2020-21**



AmrutSevabhaviSanstha, Parbhani's  
**LATEKUDURGAK.BANMERUSCIENCECOLLEGE,**  
**LONAR, DIST. BULDANA.443302.**

(Affiliated to Sant Gadge Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Mathematics**

---

**Introduction**

*Quantitative Aptitude* is the most important requisite for clearing any competitive exam. Quantitative aptitude test are becoming the norm for competitive exams in India. The aptitude questions essentially measures candidate's mental numerical ability, logical formulae application & accuracy of calculation. It also tests your mental alertness.

Department of Mathematics of our Late Ku. Durga K. Banmeru Science college, Lonar is organizing this certificate course in order to enhance students problem solving ability and help those to student who are preparing for any type of competitive examination.

**Course Objectives**

- To enhance problem solving skill among student.
- To improve the mathematical skill
- To help students who are preparing for any type competitive examination.
- Thinking critically & applying basic mathematics skill to interpret data.
- To prepare student for campus placement aptitude papers



AmrutSevabhaviSanstha, Parbhani's  
**LATEKUDURGAK.BANMERUSCIENCECOLLEGE,**  
**LONAR, DIST. BULDANA.443302.**

(Affiliated to Sant Gadage Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Mathematics**

---

**Course Outcome**

On successful completion of the course, the students will able to :

- Understandthebasicconceptsofquantitativeability.
- Solvecampusplacementaptitudepaperscoveringquantitativeaptitude.
- CompeteinvariouscompetitiveexamslikeMPSC,NET/SET,CAT,GATE  
(aptitudepart)

**Eligibility**

- Student of B.scI<sup>st</sup> , II<sup>nd</sup>& III<sup>rd</sup>

**Admission Procedure**

- Interested candidates have to make application to the Mathematics Department. A minimum of20 candidate are require for commencing thebatch.Firstcomefirstservebasedadmissionwillbethere.

**Fee Structure**

- Rs. 500/- Percandidate.

**Attendance**

- Minimum 75% Attendance is necessary in theory classes to appear for finalexamination.

**Certification**

- The Candidate successfully completing the Course shall be awarded a Certificate in appropriateform.

AmrutSevabhaviSanstha, Parbhani's  
**LATEKUDURGAK.BANMERUSCIENCECOLLEGE,**  
**LONAR, DIST. BULDANA.443302.**

(Affiliated to Sant Gadge Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Mathematics**

---

**Syllabus**

**Unit I: Basic of Quantitative Abilities**

- Problems on NumberSystem
- Problems on HCF &LCM
- Decimal &Fraction
- Simplification.

**Unit II: Arithmetic Quantitative Abilities**

- Averages
- Profit &Loss
- Ratio &Proportion
- Percentage

**Unit III: General Aptitude Problems**

- Number &Ages
- Problem onTrains
- Discount
- Partnership
- Mixture &Allegation

**Unit IV:, Problems Related to Time**

- Time &Work
- Time &Distance
- Calendar
- Clock

**Unit V: Modern Maths**

- Permutation &Combination
- Probability

AmrutSevabhaviSanstha, Parbhani's  
**LATEKUDURGAK.BANMERUSCIENCECOLLEGE,**  
**LONAR, DIST. BULDANA.443302.**

(Affiliated to Sant Gadge Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Mathematics**

---

## Teaching & Examination Scheme

Course	Teaching workload	Exam	GradeSystem
		Theory (100 Marks)	
Certificate Course in "Quantitative Aptitude "	Total 30 lectures of One Hour	50 Multiple Choice Question (each for 2 Marks)	Marks 100-81: O Grade 80-71: A Grade 70-61: B Grade 60-51: C Grade 50-00: Fail

## Recommended Books/References

- 1) R.S. Aggarwal. Quantitative Aptitude for competitive examination.
- 2) Arun Sharma - Quantitative Aptitude for CAT.
- 3) Arihant Publications - Fast track objective Arithmetic.
- 4) Abhijit Guha / McGraw Hill education - Quantitative Aptitude for all competitive examination.



**Department of Mathematics**

**Organizing Department**

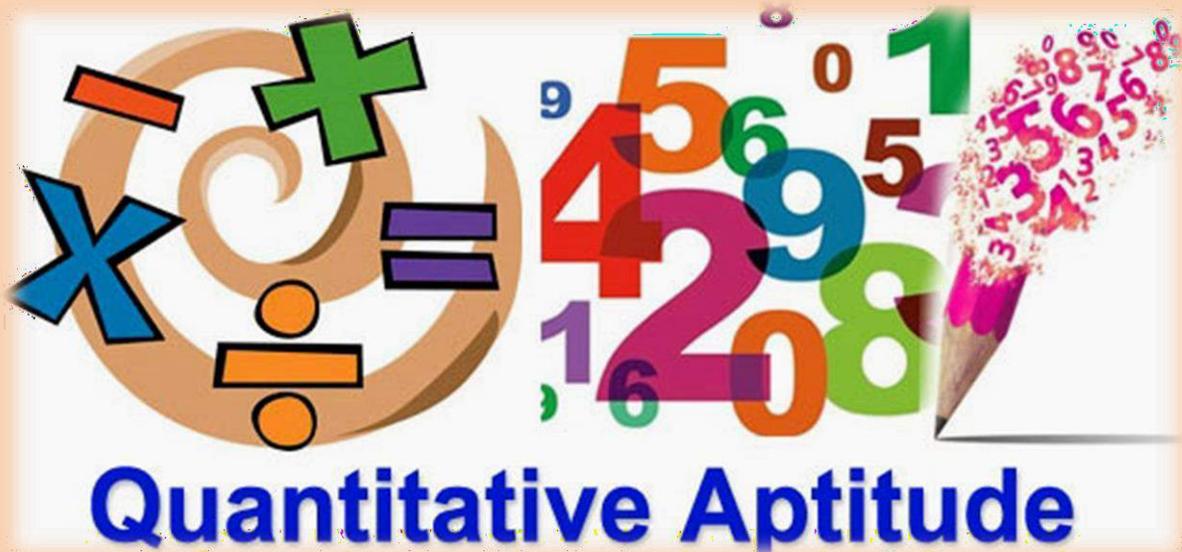
Department of Mathematics, Late Ku. Durga K. Banmeru Science College,  
Lonar ,with kind guidance of **Principal Dr. Prakash K. Banmeru sir.**

➤ **CourseCoordinator-Prof.SaurabhP.Gaikwad**

Asst. Prof. & HOD- Mathematics,  
Late Ku. Durga K. Banmeru Science College,  
Loni road, Lonar , DistBuldana  
9763055670

(CourseCoordinator)

Principal



स्थापना जुन २००० (शासन क एन.जी.सी. २००० / न.म.वि. (१/२०००) म.शि. ३ दि. २८ जुन २०००)  
अमृत सेवाभावी संस्था, परभणी संघलीत,

## कै. कु. दुर्गा क. बनमेरु विज्ञान महाविद्यालय,

लोणार ता. लोणार जि. बुलडाणा ४४३३०२

संकेतांक - ३३७

लैक मुल्यांकन प्राप्त

दूरध्वनी क. (०७२६०) २२१३१५

जा. क. :- DBSCL/22-21/303

दिनांक :- ०४/०३/२०२१

To,

Hon'ble Dy. Registrar,  
Academic Section,  
Sant Gadge Baba Amravati University, Amravati

**Subject:** About Nomination of University Representative of UGC-NSQF Approved Certificate Course.

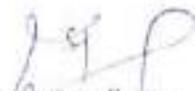
Respected Sir,

With reference to your mail in response to our letter regarding formation of Skill Assessment Board (SAB) for UGC- NSQF approved certificate course on quantitative aptitude we are giving details of Skill Assessment Board to be form for this course.

Sr.No.	Name of Member	Designation	Remark
1	Dr. P. K. Bnameru	Head of Institution	Principal/Chairman
2	Dr. M. V. Gaikwad	UGC- Coordinator	Assist. Prof.
3	Adv. Rahul Navandar	Representative from Industry Partner	Industry Partner
4	--	University Representative	To be nominated by University

Please accept this information and we request you to nominate the university representative for the formation of SAB for successful conduction of course.

Thanking You.

  
Course Coordinator

  
UGC Coordinator

Yours Faithfully

  
Principal



## Candidates Name List-

Name	Result	Mobile Number
Vaibhav Bhanudas Kulal	Pass	9766383170
Uma Ramesh Rathod	Pass	7083129370
Siddhi Santosh Banmeru	Pass	9028161799
Shubhangi vilas ade	Pass	8975695540
Rahul Subhash Mapari	Pass	9175210420
Bhavna Shekhar bhavan	Pass	7385460142
Parmeshwar vilas ambhore	Pass	7028599794
Gorakhanath Nandakishor Khandare	Pass	9022435332
Keshav kondu ghodke	Pass	9309743390
Shaikh Wasim shaikh nasim	Pass	7083847467
Ku. Vaishnavi Murlidhar Khedekar	Pass	9637474298
Vaishnavi pandhari sonune	Pass	7057605385
Neha Sahebrao Narwade	Pass	9370032497
Ganesh Sadashiv Wagh	Pass	7499667537
Ku.Aarti Fakira Dengale	Pass	8459689332
Somnath Pandurang Barbude	Pass	9309983378
Miss Rupali Atmaram Khote	Pass	9423338068
Renuka Kishor Bhukkan	Pass	9021849773
Ajay Shivaji Ban	Pass	9145600099
Sachin sopan shinde	Pass	8605459073


**Late K. Durga K. Banmeru Science College, Lonar**  
AMBA ACCREDITED UNIVERSITY COLLEGE, APPROVED BY THE UNIVERSITY OF MUMBAI  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2020-21

**CERTIFICATE**

This is to certify that **Ms/Ms. Chhishvi Yashu Ade** of **Late K. Durga K. Banmeru Science College, Lonar** have successfully completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examinations Organize by Department of Mathematics of **Late K. Durga K. Banmeru Science College, Lonar**.

 Head Dept. of Math  
(Dr. S.P. Galwad)
 Principal  
(Dr. P.K. Shambhar)

Made for this with Certificate


**Late K. Durga K. Banmeru Science College, Lonar**  
AMBA ACCREDITED UNIVERSITY COLLEGE, APPROVED BY THE UNIVERSITY OF MUMBAI  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2020-21

**CERTIFICATE**

This is to certify that **Ms/Ms. Sakshi Sunand Bhanushri** of **Late K. Durga K. Banmeru Science College, Lonar** have successfully completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examinations Organize by Department of Mathematics of **Late K. Durga K. Banmeru Science College, Lonar**.

 Head Dept. of Math  
(Dr. S.P. Galwad)
 Principal  
(Dr. P.K. Shambhar)

Made for this with Certificate


**Late K. Durga K. Banmeru Science College, Lonar**  
AMBA ACCREDITED UNIVERSITY COLLEGE, APPROVED BY THE UNIVERSITY OF MUMBAI  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2020-21

**CERTIFICATE**

This is to certify that **Ms/Ms. Sonam Prachi Bhatnagar** of **Late K. Durga K. Banmeru Science College, Lonar** have successfully completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examinations Organize by Department of Mathematics of **Late K. Durga K. Banmeru Science College, Lonar**.

 Head Dept. of Math  
(Dr. S.P. Galwad)
 Principal  
(Dr. P.K. Shambhar)

Made for this with Certificate


**Late K. Durga K. Banmeru Science College, Lonar**  
AMBA ACCREDITED UNIVERSITY COLLEGE, APPROVED BY THE UNIVERSITY OF MUMBAI  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2020-21

**CERTIFICATE**

This is to certify that **Ms/Ms. Uma Ramesh Rajad** of **Late K. Durga K. Banmeru Science College, Lonar** have successfully completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examinations Organize by Department of Mathematics of **Late K. Durga K. Banmeru Science College, Lonar**.

 Head Dept. of Math  
(Dr. S.P. Galwad)
 Principal  
(Dr. P.K. Shambhar)

Made for this with Certificate


**Late K. Durga K. Banmeru Science College, Lonar**  
AMBA ACCREDITED UNIVERSITY COLLEGE, APPROVED BY THE UNIVERSITY OF MUMBAI  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2020-21

**CERTIFICATE**

This is to certify that **Ms/Ms. Vidhya Shantini Kulkarni** of **Late K. Durga K. Banmeru Science College, Lonar** have successfully completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examinations Organize by Department of Mathematics of **Late K. Durga K. Banmeru Science College, Lonar**.

 Head Dept. of Math  
(Dr. S.P. Galwad)
 Principal  
(Dr. P.K. Shambhar)

Made for this with Certificate


**Late K. Durga K. Banmeru Science College, Lonar**  
AMBA ACCREDITED UNIVERSITY COLLEGE, APPROVED BY THE UNIVERSITY OF MUMBAI  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2020-21

**CERTIFICATE**

This is to certify that **Ms/Ms. Vidhya Pratiksha Bhanushri** of **Late K. Durga K. Banmeru Science College, Lonar** have successfully completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examinations Organize by Department of Mathematics of **Late K. Durga K. Banmeru Science College, Lonar**.

 Head Dept. of Math  
(Dr. S.P. Galwad)
 Principal  
(Dr. P.K. Shambhar)

Made for this with Certificate


**Late K. Durga K. Banmeru Science College, Lonar**  
AMBA ACCREDITED UNIVERSITY COLLEGE, APPROVED BY THE UNIVERSITY OF MUMBAI  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2020-21

**CERTIFICATE**

This is to certify that **Ms/Ms. Chaitanki Nandkumar Khambare** of **Late K. Durga K. Banmeru Science College, Lonar** have successfully completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examinations Organize by Department of Mathematics of **Late K. Durga K. Banmeru Science College, Lonar**.

 Head Dept. of Math  
(Dr. S.P. Galwad)
 Principal  
(Dr. P.K. Shambhar)

Made for this with Certificate


**Late K. Durga K. Banmeru Science College, Lonar**  
AMBA ACCREDITED UNIVERSITY COLLEGE, APPROVED BY THE UNIVERSITY OF MUMBAI  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2020-21

**CERTIFICATE**

This is to certify that **Ms/Ms. Ka. Yashanti Madhukar Khambare** of **Late K. Durga K. Banmeru Science College, Lonar** have successfully completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examinations Organize by Department of Mathematics of **Late K. Durga K. Banmeru Science College, Lonar**.

 Head Dept. of Math  
(Dr. S.P. Galwad)
 Principal  
(Dr. P.K. Shambhar)

Made for this with Certificate




Late K. V. Durga K. Banmeru Science College, Lonar  
Approved by Late K. V. Durga K. Banmeru Science College, Lonar, Dist. Jalgaon, G. D. S. B. M. S. Jalgaon (T. S. S. S.)  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2020-21

**CERTIFICATE**

This is to certify that Mr/Ms. Apur Sangh Dixi of Late K. V. Durga K. Banmeru Science College, Lonar have successfully completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examinations, Organize by Department of Mathematics of Late K. V. Durga K. Banmeru Science College, Lonar.




Head Dept. Of Math  
 (Dr. S. P. Gokhale)

Principal  
 (Dr. P. S. Banmeru)

Make this free with certificate




Late K. V. Durga K. Banmeru Science College, Lonar  
Approved by Late K. V. Durga K. Banmeru Science College, Lonar, Dist. Jalgaon, G. D. S. B. M. S. Jalgaon (T. S. S. S.)  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2020-21

**CERTIFICATE**

This is to certify that Mr/Ms. Dhruv Mukher Sharma of Late K. V. Durga K. Banmeru Science College, Lonar have successfully completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examinations, Organize by Department of Mathematics of Late K. V. Durga K. Banmeru Science College, Lonar.




Head Dept. Of Math  
 (Dr. S. P. Gokhale)

Principal  
 (Dr. P. S. Banmeru)

Make this free with certificate




Late K. V. Durga K. Banmeru Science College, Lonar  
Approved by Late K. V. Durga K. Banmeru Science College, Lonar, Dist. Jalgaon, G. D. S. B. M. S. Jalgaon (T. S. S. S.)  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2020-21

**CERTIFICATE**

This is to certify that Mr/Ms. Ganesh Ashish Wagh of Late K. V. Durga K. Banmeru Science College, Lonar have successfully completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examinations, Organize by Department of Mathematics of Late K. V. Durga K. Banmeru Science College, Lonar.




Head Dept. Of Math  
 (Dr. S. P. Gokhale)

Principal  
 (Dr. P. S. Banmeru)

Make this free with certificate




Late K. V. Durga K. Banmeru Science College, Lonar  
Approved by Late K. V. Durga K. Banmeru Science College, Lonar, Dist. Jalgaon, G. D. S. B. M. S. Jalgaon (T. S. S. S.)  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2020-21

**CERTIFICATE**

This is to certify that Mr/Ms. Kankar Kanchi Ghoshla of Late K. V. Durga K. Banmeru Science College, Lonar have successfully completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examinations, Organize by Department of Mathematics of Late K. V. Durga K. Banmeru Science College, Lonar.




Head Dept. Of Math  
 (Dr. S. P. Gokhale)

Principal  
 (Dr. P. S. Banmeru)

Make this free with certificate



AMRUT SEVABHAVI SANSTHA PARBHANI'S  
**LATE KU. DURGA K. BANMERU SCIENCE COLLEGE LONAR,**  
**DIST.BULDHANA-443302**

(UGC-2F- 12B approved, Accredited by NAAC, affiliated to Sant Gadge Baba Amravati University Amravati)

**E-BROCHURE**  
**For**  
**CERTIFICATE COURSE/DIPLOMA**

**UNDER**  
**National Skill Qualification Framework-Union Grant**  
**Commission**  
**New Dehli**

**NSQF-UGC APPROVED**



# SCOPE AND IMPORTANCE OF CERTIFICATE COURSE

Today, fish provides more than one billion poor people with most of their d  
*"Fish provides more than one billion poor people with most of their daily animal protein."*



SOURCE: WOLDFISH

The Department of Fisheries is one of the two Departments under the Ministry of Fisheries, Animal Husbandry & Dairying. It came into existence with effect from 05.02.2019 through carving out Fishery Division from the erstwhile Department of Animal Husbandry, Dairying and Fisheries vide Cabinet Secretariat's Notification F.No.1/21/21/2018-Cab dated 05.02.2019.

The Department is under the overall charge of **Shri Giriraj Singh, Hon'ble Minister for Fisheries, Animal Husbandry & Dairying** assisted by two Ministers of State for Fisheries, Animal Husbandry & Dairying namely Dr. Sanjiv Kumar Balyan and Sh. Pratap Chandra Sarangi. The administrative Head of the Department is Secretary Fisheries. Secretary Fisheries is assisted by two Joint Secretaries.

The Department is responsible for matters relating to formulation of policy and schemes relating to Development of Inland , Marine and Coastal Fisheries and Fishery Institutes namely Fishery Survey of India Mumbai, Central Institute of Fisheries Nautical and Engineering Training (CIFNET), Kerala, Central Institute of Coastal Engineering For Fishery (CICEF), Bangalore, National Institute of Fisheries Post Harvest Technology and Training,(NIFPHATT), Kochi, National Fisheries Development Board (NFDB), Hyderabad, Coastal Aquaculture Authority, Chennai.

**The list of subjects allocated to Department of Fisheries is as under:**

- Fish seed production.
- Development of fish feed and fish products industry with regard to the formulation of the demand and fixation of targets.
- Promotion and development of Fishing and Fisheries (inland, marine and beyond territorial waters) and its associated activities, including infrastructure development, Marketing, Exports, and institutional arrangements, etc.
- Welfare of Fishermen and other Fisher-folk and strengthening of their livelihoods.
- Liaison and cooperation with international organizations in matters relating to fisheries development.
- Fisheries Statistics.
- Matters relating to loss of fish stock due to natural calamities.
- Regulation of fish stock importation, Quarantine and Certification.
- Fishery Survey of India, Mumbai.
- Legislation with regard to the Prevention of the extension from one State to another of infectious or contagious diseases or pests affecting fish.
- Legislation with regard to Pattern of financial assistance to various State Undertakings, Fisheries Development Schemes through State agencies/Co-operative Unions.

AMRUT SEVABHAVI SANSTHA PARBHANI'S  
**LATE KU. DURGA K. BANMERU SCIENCE COOLEGE LONAR,**  
**DIST.BULDHANA**  
DEPARTMENT OF ZOOLOGY  
RUNS  
NSQF-UGC APPROVED  
ECONOMIC ZOOLOGY CERTIFICATE COURSE-FRESHWATER AQUACULTURE  
FARMER  
**SYLLABUS**

<b>Title of unit</b> (include any identification code used)	<b>Mandatory/ Optional</b>	<b>Estimated size (learning hours: Theory)</b>	<b>Estimated size (learning hours: Practical)</b>	<b>Level</b>
<b>Bridge Module</b> ( Introduction)	Mandatory	6	4	4
<b>AGR/N4921</b> Perform pre culture activities	Mandatory	12	38	4
<b>AGR/N4922</b> Perform post stocking culture activities	Mandatory	12	38	4
<b>AGR/N4923</b> Perform harvesting and marketing activities for freshwater organisms	Mandatory	14	36	4
<b>AGR/N4918</b> Ensure safety, hygiene and sanitation practices for culture operations	Mandatory	12	28	4

## 1. AGR/N4921 Perform pre-culture activities

1. AGR/N4921 Perform pre-culture activities	Assessment criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
	PC1. identify varieties of organisms (carps, catfish, murrels, freshwater prawn, etc.) suitable for culture in specific water bodies	<b>100</b>	9	3	6
	PC2. prepare pond for carp culture using appropriate methods for 1) removal of unwanted organisms 2) filling of water to requisite depth 3) eradication of predatory and weed fishes, 4) introducing preparatory dose of lime, manures and fertilizers		9	3	6
	PC3. prepare ponds for freshwater cat fish culture (i.e. magur – <i>Clarias batrachus</i> ) by methods such as fencing to prevent escape of fish from culture ponds		9	2	7
	PC4. prepare ponds for crustacean culture (i.e. prawn) and provide hiding structures at the bottom of the pond		8	2	6
	PC5. find out the source of quality seed for the desired organisms		8	3	5
	PC6. perform seed transport with minimum stress		8	2	6
	PC7. identify the diversified carp species for freshwater		8	3	5

	aquaculture system				
	PC8. ensure seed stocking with due acclimatisation		8	2	6
	PC9. monitor the culture methods for variety of organisms		8	2	6
	PC10. ensure availability of suitable environment for culture of specific organisms		9	3	6
	PC11. identify culture activities of each variety of organisms in culture system		8	3	5
	PC12. perform the culture activities in the desired manner		8	2	6
	<b>TOTAL</b>	100			

## 2. AGR/N4922 Perform post-stocking culture activities

<b>2. AGR/N4922 Perform post- stocking culture activities</b>	<b>Assessment criteria for outcomes</b>	<b>Total Marks</b>	<b>Out Of</b>	<b>Theory</b>	<b>Skills Practical</b>
	PC1. identify suitable water level required in culture ponds for different varieties of organisms		4	1	3
	PC2. perform periodic soil, water and fish sampling and netting operation to ensure proper management of the crop		5	2	3
	PC3. apply appropriate dosages of lime, manures, fertilizers and therapeutics to maintain suitable soil and water quality in the culture system		5	2	3
	PC4. identify plankton and benthic fauna in water		4	1	3

	PC5. apply appropriate methods for aeration of water		4	1	3
	PC6. apply suitable methods to control aquatic weeds and algae present in the culture system		4	1	3
	PC7. identify the type of fertilizers, herbicides and chemicals required for culture system and determine their appropriate dose		5	2	3
	PC8. apply the selected inputs with appropriate methods		4	1	3
	PC9. anticipate the type of diseases likely to affect the organisms and take preventive measures		5	2	3
	PC10. apply correct dose of medicines and know the mode of application for curing the organisms		4	1	3
	PC11. sample the cultured organisms at periodic interval to estimate the biomass		5	2	3
	PC12. identify the feed type and amount of daily feed ration		4	1	3
	PC13. deliver the feed with appropriate method and proper schedule		4	1	3
	PC14. determine the quantum of feed and its application for carp culture pond		4	1	3

	PC15. monitor the feed consumption and modify the daily ration accordingly		5	2	3
	PC16. treat the pond area where feed is delivered to maintain the cleanliness, periodically		5	2	3
	PC17. modify the feed ration according to the environmental condition and season		4	1	3
	PC18. determine health parameters to judge the condition of organisms in culture system		4	1	3
	PC19. determine the correct dose of medicines / disinfectants required to cure diseases		4	1	3
	PC20. separate the diseased fish from the healthy fish and put them in a quarantine tank, in case of disease outbreak		5	2	3
	PC21. diagnose the problem/disease with the help of an expert/disease diagnosis laboratory		4	1	3
	PC22. treat as per prescription at recommended dose of the therapeutics		4	1	3
	PC23. monitor the condition of fish in the quarantine tank for signs of improvement		4	1	3
	<b>TOTAL</b>	<b>100</b>			

### 3. AGR/N4923 Perform harvesting and marketing activities for freshwater organisms

3. GR/N4923 Perform harvesting and marketing activities for freshwater organisms	Assessment criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
	PC1. decide on the harvesting time and ensure timely harvesting of freshwater organisms	<b>100</b>	11	3	8
	PC2. use harvesting net with appropriate mesh size		11	3	8
	PC3. ensure harvest of only the marketable size organisms in case of partial harvesting		11	4	7
	PC4. estimate the approximate quantity to be harvested		11	3	8
	PC5. identify markets where harvested organisms can fetch reasonable price		11	3	8
	PC6. identify demand of organisms in the market to overcome situation compelling distress		12	4	8
	PC7. pack and transport harvested organisms in good condition		11	3	8
	PC8. maintain a record of harvest and sale proceeds		11	3	8
	PC9. record cost of inputs and other miscellaneous expenditures		11	4	7
	Total	100			

#### 4. AGR/N4918: Ensure safety, hygiene and sanitation practices for culture operations

4. AGR/N4918: Ensure safety, hygiene and sanitation practices for culture operations	Assessment criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
		<b>100</b>			
	PC1. ensure suitable measures for protection of from natural calamities such as flood, protect dyke from erosion or break		5	2	3
	PC10. apply effective systems and routines to ensure healthy and hygienic conditions during all stages of fish culture including transportation and marketing		5	2	3
	PC11. ensure that the fish culture premises are constantly monitored/inspected for breaches in the protection provided by health and hygiene measures		5	2	3
	PC12. undertake basic safety checks before operation of any equipments		5	2	3
	PC13. wear protective clothing and gear as and when required and ensure adherence to safety guidelines		5	1	4
	PC14. report potential hazards to the supervisor immediately		4	3	3

	PC15. follow standard procedures to deal with accidents and emergency situations		5	2	3
	PC16. use first aid kit as and when required and provide appropriate treatment in case of any injuries		5	1	4
	PC17. ensure maintenance of suitable soil and water quality parameters at all times with frequent tests		5	2	3
	PC18. ensure specified feed is provided to organisms at regular intervals and excess feeding is avoided		5	2	3
	PC19. carry out regular inspection of organisms for possible presence of parasites, pathogenic infections, any phenotypic disorder, spot, etc. which are usually the signs of ailments or disease outbreak		5	2	3
	PC20. ensure all nets, utensils and vessels used are decontaminated and clean		4	1	3
	PC21. implement effective security measures for prevention of theft/sabotage		5	1	4



Cottu Cottu



Labeo Rohita



Mrigal



<b>SR. NO</b>	<b>MONTHS</b>	<b>PARTICULAR</b>	<b>REMARKS</b>
1	Dec- Jan-2021	<ul style="list-style-type: none"> <li>- Course approval</li> <li>- E –Boucher</li> <li>- Publicity</li> <li>- Students entry /Admission</li> <li>- Skill Assessment board meeting SAB</li> </ul>	
2	Jan-Feb- 2021	<ul style="list-style-type: none"> <li>- Commencement t of online classes</li> <li>- Organic of Guest lecturer</li> <li>- Practical etc.</li> </ul>	
3	Feb-March- 2021	<ul style="list-style-type: none"> <li>- Guest Lectures</li> <li>-SAB – meeting for Department</li> <li>-Tour arrangement</li> <li>-Training of Students.</li> </ul>	
4	March- April-2021	<ul style="list-style-type: none"> <li>- Test</li> <li>-Exams</li> <li>- Result</li> <li>- Certificate</li> </ul>	
5	March- April-2021	<ul style="list-style-type: none"> <li>- Uploading of marks /Students data</li> </ul>	

College Name:- Late Ku. Durga K. Banmeru Science College Lonar Location:- Late Ku. Durga K. Banmeru Science College Lonar, Dist. Buldhna M.S

Course Name:- Certificate Course in Freshwater Fish Culture Semester:- 1 Level:- 4

Date of Assessment :- Assessor Name :- Dr.

Total Student:- 20 Present:- Absent:-

Sr. No.	Name	Father Name	Signature
1	Ku. Aditi Haridas Rindhe	Haridas	A.H. Rindhe
2	Ku. Tanuja Ganesh Katkar	Ganesh	T.Katkar
3	Ku. Ankita Ramesh Muke	Ramesh	A. Muke
4	Ku. Pallavi Sudhakar Narwade	Sudhakar	P. Narwade
5	Ku. Harshada Gajanan Sarkate	Gajanan	H. Sarkate
6	Mr. Nikhil Sukhdev Chavan	Sukhdev	N. Chavan
7	Chandrakant Tulshiram Debaje	Tulshiram	C. Debaje
8	Ku. Manisha Ashruba Palve	Ashruba	M. Palve
9	Mr. Gopal Santosh Hendre	Santosh	G. Hendre
10	Ku. Sanjivani Dashrath Bharshankar	Dashrat	S. Bharshankar
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

*(Handwritten signature)*  
H.O.D.

*(Handwritten signature)*  
10/11/22

**Principal**  
Late. Ku. Durga K. Banmeru Science Coll-  
LONAR, Dist. Buldhna



Assessor Signature

Principal/HOD Signature with Seal



## Certificate

Ms. Tanuja Ganesh Katkar D/O Ganesh (Aadhaar No: XXXXXXXX5856)

student of Late K. D. D. Banmera Science College Lonar

affiliated to Sant Gadge Baba Amravati University Amravati has successfully passed assessment for First

semester of Certificate in Freshwater Fish Farming, Session 2020-2021

Manesh Mansingka  
Chairman

Agriculture Skill Council of India

E-Mail: info@asci-india.com, www.asci-india.com



Registration No: ASCI/UGC/12439

Date of Issuance: 17 Jan, 2025



## Certificate

Ms. Ankita Ramesh Muke D/O Ramesh (Aadhaar No: XXXXXXXX6590)

student of Late Ku. Durga K. Banmeru Science College Lonar

affiliated to Sant Gadge baba Amravati University Amravati has successfully passed assessment for First

semester of Certificate in Freshwater Fish Farming, Session 2020-2021

Maneesh Mansingka  
Chairman

Agriculture Skill Council of India

E-Mail: [info@asci-india.com](mailto:info@asci-india.com), [www.asci-india.com](http://www.asci-india.com)



Registration No: ASCI/UGC/12440

Date of issuance 17 Jan, 2023



## Certificate

Ms. Pallavi Sudhakar Narwade D/O Sudhakar (Aadhaar No: XXXXXXXXX7800)

student of Late Ku. Durga S. Banmeru Science College Lonar

affiliated to Sant Gadge baba Amravati University Amravati has successfully passed assessment for First

semester of Certificate in Freshwater Fish Farming, Session 2020-2021

Maneesh Mansingka  
Chairman

Agriculture Skill Council of India

E-Mail : [info@asci-india.com](mailto:info@asci-india.com), [www.asci-india.com](http://www.asci-india.com)



Registration No: ASCI/UGC/12441

Date of Issuance 17 Jan, 2023



**Skill India**  
कौशल भारत - कुशल भारत



**ASCI**  
Agriculture Skill Council of India



**N.S.D.C**  
National  
Skill Development  
Corporation

Transforming the skill landscape  
www.nsdindia.org

## Certificate

Ms. Harshada Gajanan Sarkate D/O Gajanan (Aadhaar No: XXXXXXXXX2894)

student of Late Ku. Datta X Bonmeru Science College Lonar

affiliated to Sant Gadge baba Amravati University Amravati has successfully passed assessment for First

semester of Certificate in Freshwater Fish Farming, Session 2020-2021

Maneesh Mansingka  
Chairman

Agriculture Skill Council of India

E-Mail: [info@asci-india.com](mailto:info@asci-india.com), [www.asci-india.com](http://www.asci-india.com)



Registration No: ASCI/UGC/12442

Date of Issuance 17 Jan, 2023



## Certificate

Mr. Nikhil Sukhdev Chavan S/O Sukhdev (Aadhaar No: XXXXXXXX2551)

student of Late Ku. Durga K. Banmeru Science College Lonar

affiliated to Sant Gadge baba Amravati University, Amravati has successfully passed assessment for First

semester of Certificate in Freshwater Fish Farming, Session 2020-2021

Maneesh Mansingka  
Chairman

Agriculture Skill Council of India

E-Mail : [info@asci-india.com](mailto:info@asci-india.com), [www.asci-india.com](http://www.asci-india.com)



Registration No: ASCI/UGC/12443

Date of Issuance 17 Jan, 2023



## Certificate

Mr. Chandrakant Tulshiram Debaje S/O Tulshiram (Aadhaar No: XXXXXXXX0730)

student of Late K. S. Banmeru Science College Lonar

affiliated to Sant Gadge baba Amravati University Amravati has successfully passed assessment for First

semester of Certificate in Freshwater Fish Farming, Session 2020-2021

Maneesh Mansingka  
Chairman

Agriculture Skill Council of India

E-Mail: info@asci-india.com, www.asci-india.com



Registration No: ASCI/UGC/12444

Date of Issuance 17 Jan, 2023



**Skill India**  
कौशल भारत - कुशल भारत



**ASCI**  
Agriculture Skill Council of India



**N.S.D.C**  
National  
Skill Development  
Corporation  
Transforming the skill landscape  
www.nsdindia.org

## Certificate

Ms. Manisha Ashruba Palve D/O Ashruba (Aadhaar No: XXXXXXXXX8155)

student of Late Ku. Durga K. Banmeru Science College Lonar

affiliated to Sant Gadge baba Amravati University, Jalgaon has successfully passed assessment for First

semester of Certificate in Freshwater Fish Farming, Session 2020-2021

Manoosh Mansingka  
Chairman

Agriculture Skill Council of India

E-Mail : info@asci-india.com, www.asci-india.com



Registration No: ASCI/UGC/12445

Date of Issuance: 17 Jan, 2023



## Certificate

Mr. Gopal Santosh Hendre S/O Santosh (Aadhaar No: XXXXXXXX5732)

student of Late Ku. Durga K. Banmeru Science College Lonar

affiliated to Sant Gadge baba Amravati University Amravati has successfully passed assessment for First

semester of Certificate in Freshwater Fish Farming, Session 2020-2021

Manoosh Mansingka  
Chairman

Agriculture Skill Council of India

E-Mail : [info@asci-india.com](mailto:info@asci-india.com), [www.asci-india.com](http://www.asci-india.com)



Registration No: ASCI/UGC/T2446

Date of Issuance 17 Jan, 2023



**Skill India**  
कौशल भारत - कुशल भारत



**ASCI**  
Agriculture Skill Council of India



**N.S.D.C**  
National  
Skill Development  
Corporation  
Transforming the skill landscape  
[www.nsdindia.org](http://www.nsdindia.org)

## Certificate

Ms. Sanjivani Dashrath Bharshankar D/O Dashrat (Aadhaar No: XXXXXXXX3577)

student of Late Ku. Durga K. Banmeru Science College Lonar

affiliated to Sant Gadge baba Amravati University Amravati has successfully passed assessment for First

semester of Certificate in Freshwater Fish Farming, Session 2020-2021

Manoj Manjunga  
Chairman

Agriculture Skill Council of India

E-Mail: [info@asci-india.com](mailto:info@asci-india.com), [www.asci-india.com](http://www.asci-india.com)



Registration No: ASCI/UCC/12447

Date of Issuance: 17 Jan, 2023



**Skill India**  
कौशल भारत - कुशल भारत



**ASCI**  
Agriculture Skill Council of India



**N · S · D · C**  
National  
Skill Development  
Corporation  
Transforming the skill landscape  
www.nsdindia.org

## Certificate

Ms. Aditi Haridas Rindhe D/O Haridas (Aadhaar No: XXXXXXXX8652)

student of Late Ku. Durga K. Banmeru Science College Lonar

affiliated to Sant Gadge baba Amravati University Amravati has successfully passed assessment for First

semester of Certificate in Freshwater Fish Farming, Session 2020-2021

Manoj Mansingka  
Chairman

Agriculture Skill Council of India

E-Mail: [info@asci-india.com](mailto:info@asci-india.com), [www.asci-india.com](http://www.asci-india.com)



Registration No: ASCI/UGC/12458

Date of issuance: 17 Jan, 2023

AmrutSevabhaviSanstha, Parbhani's



**LATEKUDURGAK.BANMERUSCIENCECOLLEGE,  
LONAR, DIST. BULDANA.443302.**

(Affiliated to Sant Gadage Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Mathematics**



**Certificate Course on  
Quantitative Aptitude**



**By**

**Department of Mathematics,**

**LateKu.DurgaK.BanmeruScienceCollege,Lonar,**

**Dist. Buldana. Pin.443302.**

**2021-22**



AmrutSevabhaviSanstha, Parbhani's  
**LATEKUDURGAK.BANMERUSCIENCECOLLEGE,**  
**LONAR, DIST. BULDANA.443302.**

(Affiliated to Sant Gadge Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Mathematics**

---

**Introduction**

*Quantitative Aptitude* is the most important requisite for clearing any competitive exam. Quantitative aptitude test are becoming the norm for competitive exams in India. The aptitude questions essentially measures candidate mental numerical ability, logical formulae application & accuracy of calculation. It also tests your mental alertness.

Department of Mathematics of our Late Ku. Durga K. Banmeru Science college, Lonar is organizing this certificate course in order to enhance students problem solving ability and help those to student who are preparing for any type of competitive examination.

**Course Objectives**

- To enhance problem solving skill among student.
- To improve the mathematical skill
- To help students who are preparing for any type competitive examination.
- Thinking critically & applying basic mathematics skill to interpret data.
- To prepare student for campus placement aptitude papers



AmrutSevabhaviSanstha, Parbhani's  
**LATEKUDURGAK.BANMERUSCIENCECOLLEGE,**  
**LONAR, DIST. BULDANA.443302.**

(Affiliated to Sant Gadage Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Mathematics**

---

**Course Outcome**

On successful completion of the course, the students will able to :

- Understandthebasicconceptsofquantitativeability.
- Solvecampusplacementaptitudepaperscoveringquantitativeaptitude.
- CompeteinvariouscompetitiveexamslikeMPSC,NET/SET,CAT,GATE  
(aptitudepart)

**Eligibility**

- Student of B.scI<sup>st</sup> , II<sup>nd</sup>& III<sup>rd</sup>

**Admission Procedure**

- Interested candidates have to make application to the Mathematics Department. A minimum of20 candidate are require for commencing thebatch.Firstcomefirstservebasedadmissionwillbethere.

**Fee Structure**

- Rs. 500/- Percandidate.

**Attendance**

- Minimum 75% Attendance is necessary in theory classes to appear for finalexamination.

**Certification**

- The Candidate successfully completing the Course shall be awarded a Certificate in appropriateform.

AmrutSevabhaviSanstha, Parbhani's  
**LATEKUDURGAK.BANMERUSCIENCECOLLEGE,**  
**LONAR, DIST. BULDANA.443302.**

(Affiliated to Sant Gadge Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Mathematics**

---

**Syllabus**

**Unit I: Basic of Quantitative Abilities**

- Problems on NumberSystem
- Problems on HCF &LCM
- Decimal &Fraction
- Simplification.

**Unit II: Arithmetic Quantitative Abilities**

- Averages
- Profit &Loss
- Ratio &Proportion
- Percentage

**Unit III: General Aptitude Problems**

- Number &Ages
- Problem onTrains
- Discount
- Partnership
- Mixture &Allegation

**Unit IV:, Problems Related to Time**

- Time &Work
- Time &Distance
- Calendar
- Clock

**Unit V: Modern Maths**

- Permutation &Combination
- Probability

AmrutSevabhaviSanstha, Parbhani's  
**LATEKUDURGAK.BANMERUSCIENCECOLLEGE,**  
**LONAR, DIST. BULDANA.443302.**

(Affiliated to Sant Gadge Baba Amravati University, Amravati; UGC 2 (f) & 12 B;  
NAAC Accredited with 'C' grade)

**Department of Mathematics**

---

## Teaching & Examination Scheme

Course	Teaching workload	Exam	GradeSystem
		Theory (100 Marks)	
Certificate Course in "Quantitative Aptitude "	Total 30 lectures of One Hour	50 Multiple Choice Question (each for 2 Marks)	Marks 100-81: O Grade 80-71: A Grade 70-61: B Grade 60-51: C Grade 50-00: Fail

## Recommended Books/References

- 1) R.S. Aggarwal. Quantitative Aptitude for competitive examination.
- 2) Arun Sharma - Quantitative Aptitude for CAT.
- 3) Arihant Publications - Fast track objective Arithmetic.
- 4) Abhijit Guha / McGraw Hill education - Quantitative Aptitude for all competitive examination.



**Department of Mathematics**

**Organizing Department**

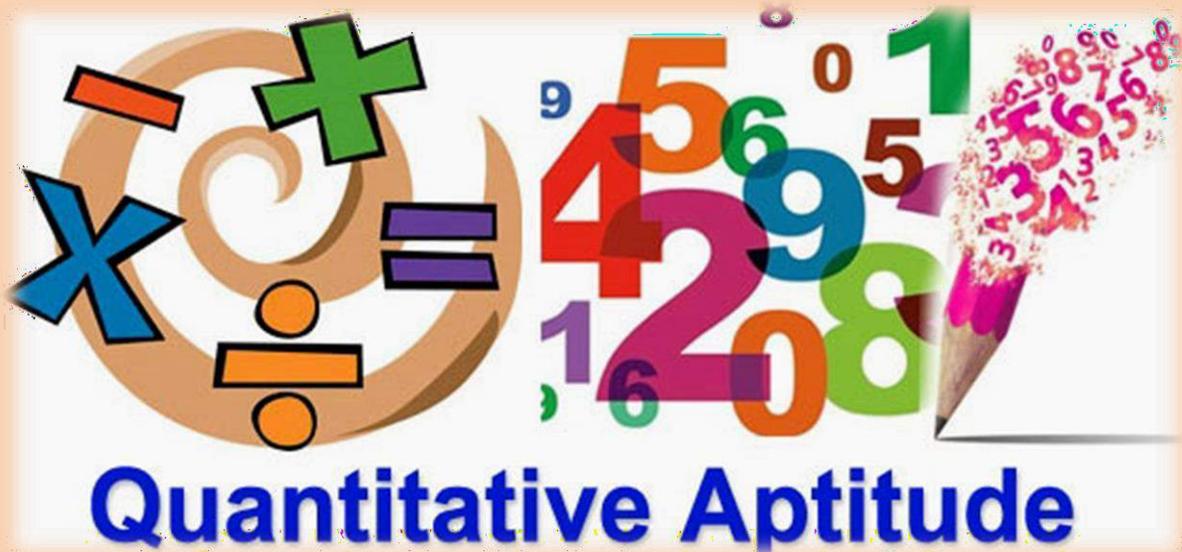
Department of Mathematics, Late Ku. Durga K. Banmeru Science College,  
Lonar ,with kind guidance of **Principal Dr. Prakash K. Banmeru sir.**

➤ **CourseCoordinator-Prof.SaurabhP.Gaikwad**

Asst. Prof. & HOD- Mathematics,  
Late Ku. Durga K. Banmeru Science College,  
Loni road, Lonar , DistBuldana  
9763055670

(CourseCoordinator)

Principal



स्थापना जुन २००० (शासन क एन.जी.सी. २००० / ब.म.वि. (१/२०००) म.शि. ३ दि. २८ जुन २०००)  
अमृत सेवाभावी संस्था, परभणी संघलीत,

## कै. कु. दुर्गा क. बनमेरु विज्ञान महाविद्यालय,

लोणार ता. लोणार जि. बुलडाणा ४४३३०२

संकेतांक - ३३७

लॅक मुल्यांकन प्राप्त

दुरध्वनी क. (०७२६०) २२१३१५

जा. क. :- DBSCL/22-21/303

दिनांक :- ०४/०३/२०२१

To,

Hon'ble Dy. Registrar,  
Academic Section,  
Sant Gadge Baba Amravati University, Amravati

**Subject:** About Nomination of University Representative of UGC-NSQF Approved Certificate Course.

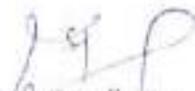
Respected Sir,

With reference to your mail in response to our letter regarding formation of Skill Assessment Board (SAB) for UGC- NSQF approved certificate course on quantitative aptitude we are giving details of Skill Assessment Board to be form for this course.

Sr.No.	Name of Member	Designation	Remark
1	Dr. P. K. Bnameru	Head of Institution	Principal/Chairman
2	Dr. M. V. Gaikwad	UGC- Coordinator	Assist. Prof.
3	Adv. Rahul Navandar	Representative from Industry Partner	Industry Partner
4	--	University Representative	To be nominated by University

Please accept this information and we request you to nominate the university representative for the formation of SAB for successful conduction of course.

Thanking You.

  
Course Coordinator

  
UGC Coordinator

Yours Faithfully

  
Principal

## Candidates Name List

<b>Name</b>	<b>Result</b>
<b>Nikita Runwal</b>	Pass
<b>Pranita Shilvant</b>	Pass
<b>Shivkanya Mundhe</b>	Pass
<b>Sujata Waghmare</b>	Pass
<b>Vaibhav Sarkate</b>	Pass
<b>Aditya Sampal</b>	Pass
<b>Arati Lade</b>	Pass
<b>Bhushan Chordiya</b>	Pass
<b>Kavita Sanap</b>	Pass
<b>Shubhangi Surushe</b>	Pass




(Affiliated to Late Gajge Baba Amravati University, Amravati, (SGC 20) and (22) (B), NAAC Accredited 'C' Grade)

**Late K. Durga K. Banmeru Science College, Lonar**  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2021-22

**CERTIFICATE**

This is to certify that **Ms/Ms Nisha Pawar** of Late K. Durga K. Banmeru Science College, Lonar have Successfully Completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examination. Organize by Department of Mathematics of Late K. Durga K. Banmeru Science College, Lonar.

  
 Head Dept. Of Math  
 (Ms. S.P. Gaidwad)
 

  
 Principal  
 (Dr. P.K. Banerjee)

Made for free with Certifyon




(Affiliated to Late Gajge Baba Amravati University, Amravati, (SGC 20) and (22) (B), NAAC Accredited 'C' Grade)

**Late K. Durga K. Banmeru Science College, Lonar**  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2021-22

**CERTIFICATE**

This is to certify that **Ms/Ms Pooja Shikhar** of Late K. Durga K. Banmeru Science College, Lonar have Successfully Completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examination. Organize by Department of Mathematics of Late K. Durga K. Banmeru Science College, Lonar.

  
 Head Dept. Of Math  
 (Ms. S.P. Gaidwad)
 

  
 Principal  
 (Dr. P.K. Banerjee)

Made for free with Certifyon




(Affiliated to Late Gajge Baba Amravati University, Amravati, (SGC 20) and (22) (B), NAAC Accredited 'C' Grade)

**Late K. Durga K. Banmeru Science College, Lonar**  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2021-22

**CERTIFICATE**

This is to certify that **Ms/Ms Shikharajyashree Mandlik** of Late K. Durga K. Banmeru Science College, Lonar have Successfully Completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examination. Organize by Department of Mathematics of Late K. Durga K. Banmeru Science College, Lonar.

  
 Head Dept. Of Math  
 (Ms. S.P. Gaidwad)
 

  
 Principal  
 (Dr. P.K. Banerjee)

Made for free with Certifyon




(Affiliated to Late Gajge Baba Amravati University, Amravati, (SGC 20) and (22) (B), NAAC Accredited 'C' Grade)

**Late K. Durga K. Banmeru Science College, Lonar**  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2021-22

**CERTIFICATE**

This is to certify that **Ms/Ms Sujata Waghmare** of Late K. Durga K. Banmeru Science College, Lonar have Successfully Completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examination. Organize by Department of Mathematics of Late K. Durga K. Banmeru Science College, Lonar.

  
 Head Dept. Of Math  
 (Ms. S.P. Gaidwad)
 

  
 Principal  
 (Dr. P.K. Banerjee)

Made for free with Certifyon




(Affiliated to Late Gajge Baba Amravati University, Amravati, (SGC 20) and (22) (B), NAAC Accredited 'C' Grade)

**Late K. Durga K. Banmeru Science College, Lonar**  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2021-22

**CERTIFICATE**

This is to certify that **Ms/Ms Vidhika Sarbati** of Late K. Durga K. Banmeru Science College, Lonar have Successfully Completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examination. Organize by Department of Mathematics of Late K. Durga K. Banmeru Science College, Lonar.

  
 Head Dept. Of Math  
 (Ms. S.P. Gaidwad)
 

  
 Principal  
 (Dr. P.K. Banerjee)

Made for free with Certifyon




(Affiliated to Late Gajge Baba Amravati University, Amravati, (SGC 20) and (22) (B), NAAC Accredited 'C' Grade)

**Late K. Durga K. Banmeru Science College, Lonar**  
 Department of Mathematics  
 Organize  
 Certificate Course On Quantitative Aptitude  
 Academic Session 2021-22

**CERTIFICATE**

This is to certify that **Ms/Ms Aditya Sengul** of Late K. Durga K. Banmeru Science College, Lonar have Successfully Completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examination. Organize by Department of Mathematics of Late K. Durga K. Banmeru Science College, Lonar.

  
 Head Dept. Of Math  
 (Ms. S.P. Gaidwad)
 

  
 Principal  
 (Dr. P.K. Banerjee)

Made for free with Certifyon



Acad. Session (Semester First Year)

**Late K. Durga K. Banmeru Science College, Lonar**  
 (Affiliated to Late Gajendra Babu Amrutkar University, Amrutkar, (U.C.C.) and U.P.G), (NAAC Accredited 'C' Grade)

Department of Mathematics

Organize

Certificate Course On Quantitative Aptitude  
 Academic Session 2021-22



**CERTIFICATE**

This is to certify that **Mr/Miss Anil Lade** of Late K. Durga K. Banmeru Science College, Lonar have Successfully Completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examination Organize by Department of Mathematics of Late K. Durga K. Banmeru Science College, Lonar.

Head Dept. Of Math  
(Dr. S.P. Galbraud)

Principal  
(Dr. P. K. Banmeru)

Made for free with Certifyfun



Acad. Session (Semester First Year)

**Late K. Durga K. Banmeru Science College, Lonar**  
 (Affiliated to Late Gajendra Babu Amrutkar University, Amrutkar, (U.C.C.) and U.P.G), (NAAC Accredited 'C' Grade)

Department of Mathematics

Organize

Certificate Course On Quantitative Aptitude  
 Academic Session 2021-22



**CERTIFICATE**

This is to certify that **Mr/Miss Bhaskar Chavhan** of Late K. Durga K. Banmeru Science College, Lonar have Successfully Completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examination Organize by Department of Mathematics of Late K. Durga K. Banmeru Science College, Lonar.

Head Dept. Of Math  
(Dr. S.P. Galbraud)

Principal  
(Dr. P. K. Banmeru)

Made for free with Certifyfun



Acad. Session (Semester First Year)

**Late K. Durga K. Banmeru Science College, Lonar**  
 (Affiliated to Late Gajendra Babu Amrutkar University, Amrutkar, (U.C.C.) and U.P.G), (NAAC Accredited 'C' Grade)

Department of Mathematics

Organize

Certificate Course On Quantitative Aptitude  
 Academic Session 2021-22



**CERTIFICATE**

This is to certify that **Mr/Miss Ka. Kavita Sawaj** of Late K. Durga K. Banmeru Science College, Lonar have Successfully Completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examination Organize by Department of Mathematics of Late K. Durga K. Banmeru Science College, Lonar.

Head Dept. Of Math  
(Dr. S.P. Galbraud)

Principal  
(Dr. P. K. Banmeru)

Made for free with Certifyfun



Acad. Session (Semester First Year)

**Late K. Durga K. Banmeru Science College, Lonar**  
 (Affiliated to Late Gajendra Babu Amrutkar University, Amrutkar, (U.C.C.) and U.P.G), (NAAC Accredited 'C' Grade)

Department of Mathematics

Organize

Certificate Course On Quantitative Aptitude  
 Academic Session 2021-22



**CERTIFICATE**

This is to certify that **Mr/Miss Ka. Shalbhaji Sawade** of Late K. Durga K. Banmeru Science College, Lonar have Successfully Completed 1 month Certificate Course On Quantitative Aptitude for Competitive Examination Organize by Department of Mathematics of Late K. Durga K. Banmeru Science College, Lonar.

Head Dept. Of Math  
(Dr. S.P. Galbraud)

Principal  
(Dr. P. K. Banmeru)

Made for free with Certifyfun



AMRUT SEVABHAVI SANSTHA PARBHANI'S  
**LATE KU. DURGA K. BANMERU SCIENCE COLLEGE LONAR,**  
**DIST.BULDHANA-443302**

(UGC-2F- 12B approved, Accredited by NAAC, affiliated to Sant Gadge Baba Amravati University Amravati)

**E-BROCHURE**  
**For**  
**CERTIFICATE COURSE/DIPLOMA**

**UNDER**  
**National Skill Qualification Framework-Union Grant**  
**Commission**  
**New Dehli**

**NSQF-UGC APPROVED**



# SCOPE AND IMPORTANCE OF CERTIFICATE COURSE

Today, fish provides more than one billion poor people with most of their d

*"Fish provides more than one billion poor people with most of their daily animal protein."*



SOURCE: WOLDFISH

The Department of Fisheries is one of the two Departments under the Ministry of Fisheries, Animal Husbandry & Dairying. It came into existence with effect from 05.02.2019 through carving out Fishery Division from the erstwhile Department of Animal Husbandry, Dairying and Fisheries vide Cabinet Secretariat's Notification F.No.1/21/21/2018-Cab dated 05.02.2019.

The Department is under the overall charge of **Shri Giriraj Singh, Hon'ble Minister for Fisheries, Animal Husbandry & Dairying** assisted by two Ministers of State for Fisheries, Animal Husbandry & Dairying namely Dr. Sanjiv Kumar Balyan and Sh. Pratap Chandra Sarangi. The administrative Head of the Department is Secretary Fisheries. Secretary Fisheries is assisted by two Joint Secretaries.

The Department is responsible for matters relating to formulation of policy and schemes relating to Development of Inland , Marine and Coastal Fisheries and Fishery Institutes namely Fishery Survey of India Mumbai, Central Institute of Fisheries Nautical and Engineering Training (CIFNET), Kerala, Central Institute of Coastal Engineering For Fishery (CICEF), Bangalore, National Institute of Fisheries Post Harvest Technology and Training,(NIFPHATT), Kochi, National Fisheries Development Board (NFDB), Hyderabad, Coastal Aquaculture Authority, Chennai.

**The list of subjects allocated to Department of Fisheries is as under:**

- Fish seed production.
- Development of fish feed and fish products industry with regard to the formulation of the demand and fixation of targets.
- Promotion and development of Fishing and Fisheries (inland, marine and beyond territorial waters) and its associated activities, including infrastructure development, Marketing, Exports, and institutional arrangements, etc.
- Welfare of Fishermen and other Fisher-folk and strengthening of their livelihoods.
- Liaison and cooperation with international organizations in matters relating to fisheries development.
- Fisheries Statistics.
- Matters relating to loss of fish stock due to natural calamities.
- Regulation of fish stock importation, Quarantine and Certification.
- Fishery Survey of India, Mumbai.
- Legislation with regard to the Prevention of the extension from one State to another of infectious or contagious diseases or pests affecting fish.
- Legislation with regard to Pattern of financial assistance to various State Undertakings, Fisheries Development Schemes through State agencies/Co-operative Unions.

AMRUT SEVABHAVI SANSTHA PARBHANI'S  
**LATE KU. DURGA K. BANMERU SCIENCE COOLEGE LONAR,**  
**DIST.BULDHANA**  
DEPARTMENT OF ZOOLOGY  
RUNS  
NSQF-UGC APPROVED  
ECONOMIC ZOOLOGY CERTIFICATE COURSE-FRESHWATER AQUACULTURE  
FARMER  
**SYLLABUS**

<b>Title of unit</b> (include any identification code used)	<b>Mandatory/ Optional</b>	<b>Estimated size (learning hours: Theory)</b>	<b>Estimated size (learning hours: Practical)</b>	<b>Level</b>
<b>Bridge Module</b> ( Introduction)	Mandatory	6	4	4
<b>AGR/N4921</b> Perform pre culture activities	Mandatory	12	38	4
<b>AGR/N4922</b> Perform post stocking culture activities	Mandatory	12	38	4
<b>AGR/N4923</b> Perform harvesting and marketing activities for freshwater organisms	Mandatory	14	36	4
<b>AGR/N4918</b> Ensure safety, hygiene and sanitation practices for culture operations	Mandatory	12	28	4

## 1. AGR/N4921 Perform pre-culture activities

1. AGR/N4921 Perform pre-culture activities	Assessment criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
	PC1. identify varieties of organisms (carps, catfish, murrels, freshwater prawn, etc.) suitable for culture in specific water bodies	<b>100</b>	9	3	6
	PC2. prepare pond for carp culture using appropriate methods for 1) removal of unwanted organisms 2) filling of water to requisite depth 3) eradication of predatory and weed fishes, 4) introducing preparatory dose of lime, manures and fertilizers		9	3	6
	PC3. prepare ponds for freshwater cat fish culture (i.e. magur – <i>Clarias batrachus</i> ) by methods such as fencing to prevent escape of fish from culture ponds		9	2	7
	PC4. prepare ponds for crustacean culture (i.e. prawn) and provide hiding structures at the bottom of the pond		8	2	6
	PC5. find out the source of quality seed for the desired organisms		8	3	5
	PC6. perform seed transport with minimum stress		8	2	6
	PC7. identify the diversified carp species for freshwater		8	3	5

	aquaculture system				
	PC8. ensure seed stocking with due acclimatisation		8	2	6
	PC9. monitor the culture methods for variety of organisms		8	2	6
	PC10. ensure availability of suitable environment for culture of specific organisms		9	3	6
	PC11. identify culture activities of each variety of organisms in culture system		8	3	5
	PC12. perform the culture activities in the desired manner		8	2	6
	<b>TOTAL</b>	100			

## 2. AGR/N4922 Perform post-stocking culture activities

<b>2. AGR/N4922 Perform post-stocking culture activities</b>	<b>Assessment criteria for outcomes</b>	<b>Total Marks</b>	<b>Out Of</b>	<b>Theory</b>	<b>Skills Practical</b>
	PC1. identify suitable water level required in culture ponds for different varieties of organisms		4	1	3
	PC2. perform periodic soil, water and fish sampling and netting operation to ensure proper management of the crop		5	2	3
	PC3. apply appropriate dosages of lime, manures, fertilizers and therapeutics to maintain suitable soil and water quality in the culture system		5	2	3
	PC4. identify plankton and benthic fauna in water		4	1	3

	PC5. apply appropriate methods for aeration of water		4	1	3
	PC6. apply suitable methods to control aquatic weeds and algae present in the culture system		4	1	3
	PC7. identify the type of fertilizers, herbicides and chemicals required for culture system and determine their appropriate dose		5	2	3
	PC8. apply the selected inputs with appropriate methods		4	1	3
	PC9. anticipate the type of diseases likely to affect the organisms and take preventive measures		5	2	3
	PC10. apply correct dose of medicines and know the mode of application for curing the organisms		4	1	3
	PC11. sample the cultured organisms at periodic interval to estimate the biomass		5	2	3
	PC12. identify the feed type and amount of daily feed ration		4	1	3
	PC13. deliver the feed with appropriate method and proper schedule		4	1	3
	PC14. determine the quantum of feed and its application for carp culture pond		4	1	3

	PC15. monitor the feed consumption and modify the daily ration accordingly		5	2	3
	PC16. treat the pond area where feed is delivered to maintain the cleanliness, periodically		5	2	3
	PC17. modify the feed ration according to the environmental condition and season		4	1	3
	PC18. determine health parameters to judge the condition of organisms in culture system		4	1	3
	PC19. determine the correct dose of medicines / disinfectants required to cure diseases		4	1	3
	PC20. separate the diseased fish from the healthy fish and put them in a quarantine tank, in case of disease outbreak		5	2	3
	PC21. diagnose the problem/disease with the help of an expert/disease diagnosis laboratory		4	1	3
	PC22. treat as per prescription at recommended dose of the therapeutics		4	1	3
	PC23. monitor the condition of fish in the quarantine tank for signs of improvement		4	1	3
	<b>TOTAL</b>	<b>100</b>			

### 3. AGR/N4923 Perform harvesting and marketing activities for freshwater organisms

3. GR/N4923 Perform harvesting and marketing activities for freshwater organisms	Assessment criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
	PC1. decide on the harvesting time and ensure timely harvesting of freshwater organisms	<b>100</b>	11	3	8
	PC2. use harvesting net with appropriate mesh size		11	3	8
	PC3. ensure harvest of only the marketable size organisms in case of partial harvesting		11	4	7
	PC4. estimate the approximate quantity to be harvested		11	3	8
	PC5. identify markets where harvested organisms can fetch reasonable price		11	3	8
	PC6. identify demand of organisms in the market to overcome situation compelling distress		12	4	8
	PC7. pack and transport harvested organisms in good condition		11	3	8
	PC8. maintain a record of harvest and sale proceeds		11	3	8
	PC9. record cost of inputs and other miscellaneous expenditures		11	4	7
	Total	100			

#### 4. AGR/N4918: Ensure safety, hygiene and sanitation practices for culture operations

4. AGR/N4918: Ensure safety, hygiene and sanitation practices for culture operations	Assessment criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
		<b>100</b>			
	PC1. ensure suitable measures for protection of from natural calamities such as flood, protect dyke from erosion or break		5	2	3
	PC10. apply effective systems and routines to ensure healthy and hygienic conditions during all stages of fish culture including transportation and marketing		5	2	3
	PC11. ensure that the fish culture premises are constantly monitored/inspected for breaches in the protection provided by health and hygiene measures		5	2	3
	PC12. undertake basic safety checks before operation of any equipments		5	2	3
	PC13. wear protective clothing and gear as and when required and ensure adherence to safety guidelines		5	1	4
	PC14. report potential hazards to the supervisor immediately		4	3	3

	PC15. follow standard procedures to deal with accidents and emergency situations		5	2	3
	PC16. use first aid kit as and when required and provide appropriate treatment in case of any injuries		5	1	4
	PC17. ensure maintenance of suitable soil and water quality parameters at all times with frequent tests		5	2	3
	PC18. ensure specified feed is provided to organisms at regular intervals and excess feeding is avoided		5	2	3
	PC19. carry out regular inspection of organisms for possible presence of parasites, pathogenic infections, any phenotypic disorder, spot, etc. which are usually the signs of ailments or disease outbreak		5	2	3
	PC20. ensure all nets, utensils and vessels used are decontaminated and clean		4	1	3
	PC21. implement effective security measures for prevention of theft/sabotage		5	1	4



Cottu Cottu



Labeo Rohita



Mrigal



<b>SR. NO</b>	<b>MONTHS</b>	<b>PARTICULAR</b>	<b>REMARKS</b>
1	Dec- Jan-2021	<ul style="list-style-type: none"> <li>- Course approval</li> <li>- E –Boucher</li> <li>- Publicity</li> <li>- Students entry /Admission</li> <li>- Skill Assessment board meeting SAB</li> </ul>	
2	Jan-Feb- 2021	<ul style="list-style-type: none"> <li>- Commencement t of online classes</li> <li>- Organic of Guest lecturer</li> <li>- Practical etc.</li> </ul>	
3	Feb-March- 2021	<ul style="list-style-type: none"> <li>- Guest Lectures</li> <li>-SAB – meeting for Department</li> <li>-Tour arrangement</li> <li>-Training of Students.</li> </ul>	
4	March- April-2021	<ul style="list-style-type: none"> <li>- Test</li> <li>-Exams</li> <li>- Result</li> <li>- Certificate</li> </ul>	
5	March- April-2021	<ul style="list-style-type: none"> <li>- Uploading of marks /Students data</li> </ul>	

**rediffmail**

Mailbox of dr.milindg\_2010

**Subject: Approval of fresh programmes / courses under NSQF for the year 2020-21**

From: nsqfugc2020@gmail.com on Thu, 22 Oct 2020 17:52:43

To: dr.milindg\_2010@rediffmail.com

Dear Sir/Madam,

This is with reference to your application for skill-based programmes / courses. I am directed to convey that your institution may run the following fresh programmes / courses under National Skills Qualifications Framework (NSQF) during the academic session 2020 - 2021:

Programme/s	Course/s
Certificate	ECONOMIC ZOOLOGY
Certificate	Quantitative Aptitude for Competitive Examination
Certificate	Industrial Chemistry
Certificate	Herbal Medicine
Diploma	Renewable Energy

The institution must adhere to the following terms and conditions:

The institutions shall run the courses in accordance with the provisions of the UGC Guidelines for Providing Skill-based Education under National Skills Qualifications Framework.

The institution shall meet the requirements of infrastructure and laboratory facilities for running the skill-based courses.

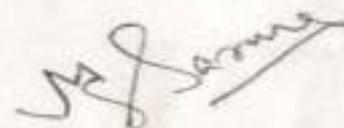
The institutions which are recommended for running skill courses in the fields like medical, law etc. shall meet the parameters specified by the respective regulatory bodies/professional councils before starting those courses.

The institutions shall run the courses on regular mode only and the courses shall not be run on online/distance education mode and through franchise agreement / arrangements.

The institution shall furnish details regarding students admitted (course-wise) for the forthcoming academic session on the online portal by **30.11.2020**. The link to the portal is <https://nsqf.ugc.ac.in/>

With regards,

Yours faithfully,



(Dr. Mriganka Sekhar Sarma)  
(Education Officer)

Late Ku. Durga K. Banmeru Science College  
Shivaji Colony, Mehkar i Road, Lonar, Tq. Lonar, Dist. Buldhana, M.S. India

Online student Admission  
Last date - 31 - december - 2020



**Skill India**  
कौशल भारत - कुशल भारत



**ASCI**  
Agriculture Skill Council of India



**N·S·D·C**  
National  
Skill Development  
Corporation  
Transforming the skill landscape  
www.nsdcindia.org

# Certificate

Ms. Akansha G. Darade D/O Ganesh (Aadhaar No: XXXXXXXX5505)

student of Late Ku. Durga K. Banmeru Science College Lonar affiliated to S.G.BAU Amravati

has successfully passed assessment for First semester of

Certificate in Freshwater Aquaculture, Session 2020-21

Maneesh Mansingka  
Chairman

Agriculture Skill Council of India

E-Mail: info@asci-india.com, www.asci-india.com



Registration No: ASCI/UGC/9540  
Date of Issuance: 15 Dec, 2021



**Skill India**  
कौशल भारत - कुशल भारत



**ASCI**

Agriculture Skill Council of India



**NSDC**  
National  
Skill Development  
Corporation

Transforming the skill landscape  
www.nsdciindia.org

# Certificate

Ms. Aarti S.Chenge D/O Surestha (Aadhaar No: XXXXXXXX2624)

student of Late Ku. Durga K. Banmeru Science College Lonar affiliated to S.G.B.A.U Amravati

has successfully passed assessment for First semester of

Certificate in Freshwater Aquaculture, Session 2020-21

Maneesh Mansingka  
Chairman

Agriculture Skill Council of India

E-Mail : info@asci-india.com, www.asci-india.com



Registration No: ASCI/UGC/9549

Date of Issuance 15 Dec, 2021



**Skill India**

कौशल भारत - कुशल भारत



**ASCI**

Agriculture Skill Council of India



**N-S-D-C**  
National  
Skill Development  
Corporation

Transforming the skill landscape

[www.nsdindia.org](http://www.nsdindia.org)

# Certificate

Mr. Pawan G. Yewle S/O Gajanan (Aadhaar No: XXXXXXXX3806)

student of Late Ku. Durga K. Banmeru Science College Lonar affiliated to SGBAU Amravati

has successfully passed assessment for First semester of

Certificate in Freshwater Aquaculture, Session 2020-21

Maneesh Mansingka  
Chairman

Agriculture Skill Council of India

E-Mail: [info@asci-india.com](mailto:info@asci-india.com), [www.asci-india.com](http://www.asci-india.com)



Registration No: ASCL/UGC/9546

Date of Issuance: 15 Dec. 2021





**Skill India**  
कौशल भारत - कुशल भारत



**ASCI**

Agriculture Skill Council of India



**N.S.D.C**  
National  
Skill Development  
Corporation

Transforming the skill landscape  
www.nsdcindia.org

# Certificate

Mr. Mufiz Ahemad Sk.Kabir S/O Kabir (Aadhaar No: XXXXXXXX6830)

student of Late Ku. Durga K. Banmeru Science College Lonar affiliated to S.G.BAU Amravati

has successfully passed assessment for First semester of

Certificate in Freshwater Aquaculture, Session 2020-21

Maneesh Mansingka  
Chairman

Agriculture Skill Council of India

E-Mail : info@asci-india.com, www.asci-india.com



Registration No: ASCI/UGC/9547

Date of Issuance 15 Dec, 2021



**Skill India**

कौशल भारत - कुशल भारत



**ASCI**

Agriculture Skill Council of India



N S D C

National  
Skill Development  
Corporation

Transforming the skill landscape

www.nsdcindia.org

# Certificate

Mr. Vaibhav P. Gadekar S/O Purushottam (Aadhaar No: XXXXXXXX4049)

student of Late Ku. Durga K. Banmeru Science College Lonar affiliated to S.G.B.A.U Amravati

has successfully passed assessment for First semester of

Certificate in Freshwater Aquaculture, Session 2020-21

Maneesh Mansingka  
Chairman

Agriculture Skill Council of India

E-Mail : [info@asci-india.com](mailto:info@asci-india.com), [www.asci-india.com](http://www.asci-india.com)



Registration No: ASCI/UGC/9557

Date of Issuance 15 Dec, 2021





**Skill India**

कौशल भारत - कुशल भारत



**ASCI**

Agriculture Skill Council of India



N·S·D·C

National  
Skill Development  
Corporation

Transforming the skill landscape

www.nsdindia.org

# Certificate

Mr. Vaibhav S. More S/O Suresh (Aadhaar No: XXXXXXXX3248)

student of Late Ku. Durga K. Banmeru Science College Lonar affiliated to S.G.B.A.U Amravati

has successfully passed assessment for First semester of

Certificate in Freshwater Aquaculture, Session 2020-21

Maneesh Mansingka

Chairman

Agriculture Skill Council of India

E-Mail : [info@asci-india.com](mailto:info@asci-india.com), [www.asci-india.com](http://www.asci-india.com)



Registration No: ASCI/UGC/9545

Date of Issuance 15 Dec, 2021



Scanned with OKEN Scanner

College Name:- Late Ku. Durga K. Banmeru Science College Lonar			Location:- Late Ku. Durga K. Banmeru Science College Lonar, Dist. Buldhna M.S.			
Course Name:- Certificate Course in Freshwater Fish Culture			Semester:- 1 Level:- 4			
Date of Assessment:- 22-09-2021			Assessor Name:- Dr. Priya Dhabre			
Total Student:- 20		Present:-	Absent:-			
Sl. No.	Name	Father Name	Assessment Parameters: (MIM 60)			
			MCQ (15)	Viva(10)	Practical (35)	Total (60)
1	LADAR D. DAVHALE	Bhattaraya				
2	Rachna S. Bodihe	Surendra				
3	Valbhav P. Godekar	Punjabhram				
4	Ruchita S. Kocher	Jalchand				
5	Papal P. Sharma	Pravin				
6	Amantha G. Dorale	Ganesh				
7	Savitri E. Marathe	Kalsh				
8	Kanchan S. Garkat	Saicharam				
9	Pawan J. Tangure	Jayardhan				
10	Shubhangi Eklawar	Prakash				
11	Valbhav S. More	Suresh				
12	Pawan G. Yewle	Gajanan				
13	Mulla Ahmed Sh. Kabir	Kabir				
14	Mohan G. Bhivande	Gajanan				
15	Aarti S. Chenge	Sureshtha				
16	Snehal S. Deshpande	Surendra				
17	Valbhav S. Sirvat	Suresh				
18	Amol A. Palve	Ashok				
19	Valbhav R. Sonap	Ramdas				
20	Sanket M. Torikadi	Mingorhappa				
Assessor Signature						

  
 Principal  
 Late Ku. Durga K. Banmeru Science College  
 71107 Dist. Buldhna